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**News**

**18** News of Gateway 2000's new subsidiary company Amiga, Inc.

**Games** ..... 37

**38** On Escapes: Interview

**Previews**

**40** The Shadow of the Third Moon  
**40** Street Racer

**Reviews**

**42** Civilization CD  
**43** Gunship 2000  
**43** Railroad Tycoon  
**44** Strangers AGA

**Tech Scene** ..... 49

**50** Fusion Mac Emulator

**52** Mt. II EZ Tower

**54** Storm C

**56** Apollo 1280/64

**59** pOS

**61** FFNews 2.0

**61** NewYork 1.0

**62** Supra Express 56

**62** Zyxel Omni.net

**64** PD Scene

**66** PD Utilities

**70** CD-ROM Scene

**72** Art Gallery

**Workshop** ..... 75

**76** Imagine 4.0

**80** Amiga C Programming

**82** Wired World

**84** Net God

**86** Surf of the Month

**88** Back Issues

**88** Sound Lab: Project XG

**90** Desktop Publishing

**94** Reader CD-ROM contributions

**95** Next Month

**96** Q&A, and FAQ

**100** Backchat

**103** Subscriptions

**104** Points of View

**Cover disks****8 Visual Prefs**

Customize your Workbench and GLIDE like you never thought possible.

**8 Video Base**

Unique and exciting "cellular motion" animations.

**9 Virus 2**

Free your disks of destructive viruses with this fast virus exterminator.

**9 TB 303****Emulator**

A TB303 analoge synthesizer for the Amiga.

**10 Super****CD-ROM 15**

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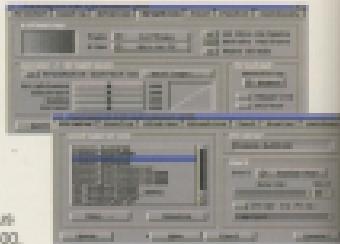


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# Disk 166



TFX wouldn't fit on the floppies so we've crammed four top applications on our two coverdisks. Wow!

## Visual Prefs

Visual Prefs allows you to customize your WorldwideWeb to a very high degree. After Visual Prefs is installed, its own installer can assist you so that it copies necessary files to WorldwideWeb. It will generally create a new preferences file in your WorldwideWeb prefs directory called `Q111`. After Visual Prefs is installed, you may delete the temporary choices.

Visual Prefs allows changing of the colors used to draw windows and the standard gadgets

found in WorldwideWeb. See the accompanying screenshot for an example on what Visual Prefs is able to do. We haven't the room to document the 100+ preferences program is full too, the best bet is to jump in and play with the intuitive settings and read the documentation provided with Visual Prefs. With just a bit of effort your WorldwideWeb will look totally revitalized!

It is worth noting that while Visual Prefs is fairly reliable, it is an extensive system patch. Like any system patch, it may conflict with your software or more likely, other patches you have installed. Visual Prefs is known to not work with PooPoo and CenterFills. If you run into problems at all, you can uninstall Visual Prefs by running the `Run VisualPrefs` file from your startup sequence.



### Loading Instructions

This month we've crammed four top applications onto our two coverdisks 166 and 167. Each of them is easily installed from coverdisk 166 via WorldwideWeb. Coverdisk 166 has all of the installers so there's no need to insert coverdisk 166 until the installer asks for that disk. Remember, access coverdisk 166 via WorldwideWeb, don't try to load it. When you click on any of the installers save on coverdisk 166, you'll be given a file requester where you must choose a location on your hard drive (or even RAM) where you want to install the application.

# Video Easel

Video Easel is a stunning package that allows manipulation of a whole range of animated 'M4' type algorithms known as cellular automata. As such it's a little complex and is aimed at more experienced Amiga users, it will also require around 30M of free memory free.

After Video Easel has been installed, there's a few extra things we may need to do depending how much free space you have. Video Easel itself will contain an archive called `ReadMeM4.lib`, and the `ReadMeM4.lib` must be installed to your `Libs` directory to use the `CAmake` script provided. Libraries you do this, of course, `ReadMeM4.lib` will be loaded from either your `LIBStartup` or your `auto-startup` sequence. To extract the archive, go to the shell and CD to the directory where you have installed Video Easel. Then you need to run in the following:

`tar xvfz ReadMeM4.lib`

Naturally you'll need a copy of the `LiM4` archive but who doesn't by now? If you experience graphical problems with drawing lines, read the `VideoEasel.DOC` (available from <http://www.angelfire.com/ab2/VideoEasel/>) documentation on install the `PixelDraw` patch to fix this problem. We found that this wasn't necessary on our machines. Video Easel is a highly complex package that will certainly benefit from reading the entire documentation archive provided. It's a brief tour through running Video Easel, load its stuff. From `VideoEasel`, Select the `Open` option in the `File` menu. Locate the file called `Color` in the file requester and press `Open`. VideoEasel will ask if it's OK to clear the screen.

Answer `OK`, load the blue colour for drawing by moving the mouse over the blue rectangle at the lower right corner of the screen



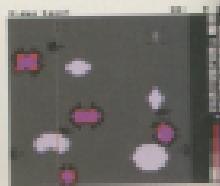
and pressing the left mouse button. Select `Load` from the `Brush` menu. Select the file `gigglebox.lib` and press `Load`.

A memory shape will be attached to your mouse pointer now. Move the mouse pointer somewhere in the middle of the screen and press the left mouse button once. This will place this shape in the screen. Start the action by pressing the `< >` shaped button right on the screen and see what happens. This will start the copying of new generations of this automata.

It's made more exciting by changing the speed from shortening the delay between generations. This automata will begin to move and there periodicities and gaps and a glider each several cycles of the automata. The gliders will start moving in the lower right direction. Stop the automata with the same button on the tool bar. Load another brush with the same colour and place it somewhere on the screen. Try experimenting!

Physical laws such as the 'binomial growth' algorithms can be modeled with cellular automata, even thermodynamics and the gas laws are other applications. Also the propagation of sound in gas can even be simulated, in addition to the focusing of sound by an optical mirror.

See the `Experiments` section of the provided `AmigaGuide`.

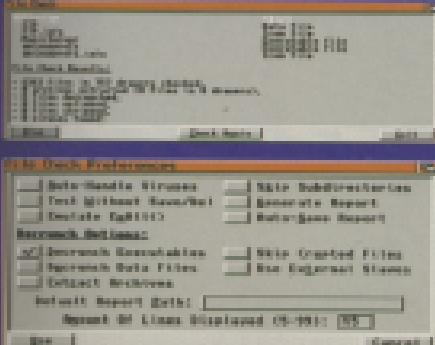




## Virus Z

This latest version 1.09 of Virus Z will keep your drives free from destructive viruses. Even the very most hideous, most Trojan, MMX II and Xplode type viruses are fully recognized, eliminated and damage repaired. Virus Z can be installed directly where you intend to re-size, all that's required then is to click on the Install Link icon in the newly created VirusZ directory and the new bootable will be copied to your Workbench. Virus Z is fairly straightforward in operation and comes with good on-line help files to point you in the right direction. When first running Virus Z, it will almost certainly complain about system sectors being partitioned. This is

often this is because of third party partitioners you may be running such as MultiC� or MDCP. The settings menu contains the options for the various virus checking procedures. The most important is the file checking settings. Virus Z has the ability to extract compressed files to see if there's a virus hiding inside, this panel controls these settings. To check your Workbench partitions, simply activate the file check option in the Project menu, select your Workbench with the Navigator, press the All button and then OK. Virus Z will appear showing progress and you'll be prompted to remove any found viruses, so rest easy with VirusZ.



# TB 303 Emulator

If you like techno, the legendary Roland TB 303 Bassline should need no introduction. For the benefit of those who are unfamiliar with this musical electronic icon, the 303, as it is generally known, was originally thought of as a cheap electronic replacement for a live bass player. It wasn't until the mid '90s that people realised you could get some wild sounds from it and made the first acid house tracks. It's been discontinued for many years now, and second hand units fetch up to £1000, which is quite amazing considering the simplicity of the technology.

But you don't have to pay £1000 to get that unique 303 sound, as we've an accurate emulator on this month's disk. It works by a control panel of knobs - like the real thing - and renders samples in sequences which can be saved out as standard MP3 samples. Preview the settings by pressing the spacebar, although this won't include the effects and adjustments. Use the left and right mouse buttons to turn the knobs (use 1 and 3 especially for top sounds). See Sound Lab on page 98 for more, but for now have a play with it... and watch your bassists.

### Control guide



1. Set the tuning for the note
2. Emphasise the specified frequency band
3. The amount of frequency resonance
4. Point at which the filter closes (turn right for no filter change)
5. Total length of the "decay" part of the sound
6. Define the amount of accent
7. Single or sequence mode
8. Sets the source wave type
9. How much the note will pitch (turn up or down)
10. Direction of the pitch bend
11. Opens the preferences menu
12. Not yet implemented
13. Loads it up in the cloud
14. Resonance fall level
15. Cut the program
16. Undo last change made
17. Select a new sound
18. Brings up the help guide
19. Brings back to Workbench
20. Load a script to render
21. Set the start of the sequence
22. Set the end of the sequence
23. Add a chorus effect
24. Add a distortion effect
25. Add clipping distortion
26. Remove lower frequencies
27. Load parameters from disk
28. Save parameters to disk
29. Load the current sound
30. Save it
31. Render the sound to MP3 according to current settings
32. Save the rendered sample
33. Play the rendered sample
34. Set the sample
35. Render a sequence
36. Total length of sequence

# CD-ROM

# Super CD-ROM 15



Welcome to QACCD-9. If you haven't invested in a CD-ROM yet, read this to see exactly what it is that you're missing.

DSO915 can be boosted from a 5000 to an 81200-9000 with CDSI insulation. In order to use this CDSI from your own Workbooks, you only need to click on the InitCD icon, which will then allow software to run from the CDSI. It initiates MSA (Even and the Headcom systems - don't be surprised if the look of your Workbooks suddenly changes to change. The software is in solid transparency, and it can be removed by simply clicking on InitCD again.

To help you in finding your way around, there is a **BOOK GUIDE**, which will connect you to nearly all text documents, and **INDEX** which is a **CROSS** search tool. Just like everything else on the OB, you need to click on them to activate them.

### How Much Wheat?

It's easy to miss when the real contents of a CD-ROM has so few's a list of files many does lie in such directory. This month our theme is *Shape-Shifter* and games - a bumper collection of over 500K of Shape-Shifter utilities and support files, and not to mention a whopping great 1.5MB of games! Value for money or what?

This month's CUCD is even more amazing than normal! The full version of the legendary TFX and a 100% full 650Mb of other wonderful goodies, make up CUCD15.

## Headlights

TEH

CD-Arcade's gaming coup de grace, the full version of Dassault's unreleased TFX flight simulator. This game can be found in its entirety on the CD with versions for standard Amigas, those fitted with TIFUs and 60040 machines. You'll even find a dozen of files which you need to copy onto TOS99 PC floppy disks if you're using this special CD from a PC compatible. Installation by hand can also be performed with the provided installer script or dragging all the TFX directory files.



### On the Horizon

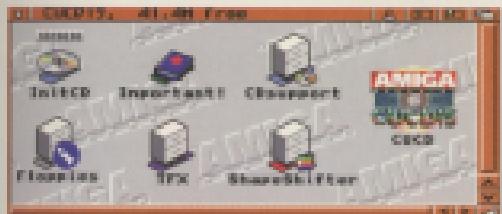
This directory carries the contents of the floppy disk from the floppy issue of *CU-Ampia*. This month we've included 40 emulating utilities, Visual Basic for creating the algorithm emulators, Virtual3D for a 3D/3D synthesizer emulator, VisualBasic to customize your WinAmp/WinAmp2, the norm and Visual3D to keep your Ampia safe from viruses.

## User applications

Reaction to IDEs on CUCDs has been a mixed bag of criticism and praise. Much of the problems have been caused by a lack of understanding of what IDE is for and failure to click on the essential IDE-IDE icon. This month we have made some changes to the IDE launcher to work around the resulting problems so that this system is more fail-proof.

For those that missed it, most project icons on CUCDs now have IDs as the default tool. (Or allow you to choose exactly what viewers and players you will use for specific types of files. Graphics card users may display all pictures on current and future CUCDs with a hi-resolution viewer, for example. Your preferences are saved to your hard drive. This month, we've moved the CUCDsprefs driver to the root of CUCD 5 and added an "Important" heading as well. If you've customized your CD preferences (or left some of the viewers on CD), you'll need to change your CUCD path to the new directory. (Simply delete the "System" part of the path so CUCD\System\CD\cucdsprefs becomes

## What's in your drawers?



Next, as previously mentioned, the CDspurfer drawer can now be found in the tool. The standard Workbench drawers icons have vanished through the drawers, replaced with the CDspurfer drawer and an opening Peacock file. TTF, the ShapeShifter theme drawer and the main CD32 icon can be found here.

**TTF:** If you don't know what TTF is, greetings from planet Earth. Instead of reading this, you could be playing the Amiga's ultimate legendary flight sim. Go play!

**Diskopps:** We like the letter V this month. So this happy diskette contains Nose Brake, Visual Basic, Virtual 3D and Virus Z. Naturally they're all found ready to go in this drawer.

**ShapeShifter:** A bumper collection of ShapeShifter and Macintosh emulator utilities. The latest ShapeShifter 2.8, Video drivers, utilities and Macintosh 7.0.1 cassette and System 7.4.3 update.

**CDspurfer:** The vital support files for the CD viewers, players, IDE and not forgetting the obligatory DCDrvs programs.

**CD32:** This is where the vast majority of the CD files, what romines can be found within.

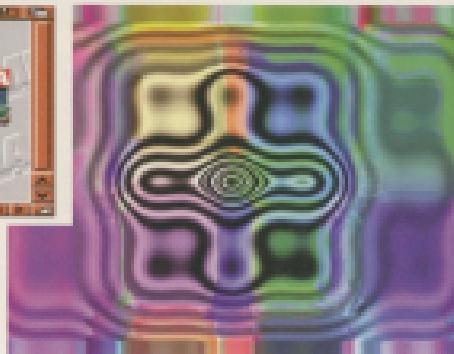
**CDROM:** The latest Amiga CDs, Amiga CD indexes, CD collection and two audio CD player utilities.

**Demos:** AGA and EGS offerings to thrill your plasma, and roase your 3D world. Turn the lights low, crank your stereo and enjoy!

**Games:** This month's second theme is gaming, thanks to TTF, and there's enough games and game add-ons on CD32 to

keep you going for a LONG time. A free Shadow of the Third Reich is an essential download.

**Graphics:** Anim8, converters, viewers, utilities, Cyber�ions, Colors, icons, Phenomena, Rosssoft and much, much more graphical delights for you.



**Magazine:** Fresh Amiga Basic and Amiga Basic to ASCII items to the Amiga questions this month, also the database of CD Amiga issues.

**Online:** The new Easycopy E-mail beta package, the superb Weather Experience (as covered in Wired World) will add a couple of the coming to life.

**Previous:** Digital Out and Digital Universe drives, plus a Commodore special with a Mist preview and... the bi-monthly good

**CD32spurfer demo:** Code of all shapes and forms from the CDspurfer, Multiplex, Utilities, latest kernel libraries and dev package should keep the coders happy.

**Readers:** A wicked collection of games, utilities, pictures and modules from our dear, wonderfully talented readers. Gee, you guys are just great!

**Sound:** All things sonic and noisey from the latest utilities AmigaMusic 2.2, Hyperlayer, MIDI files, MP3 encoder and the latest players and so on, and so on...

**Utilities:** These custom little gems that make the Amiga what it is. The latest InfoBox, Discovr, icons, PCI, VDisk and more.

**WWW:** The big three web browsers, AWeb 2.0, Browser 1.12 and Navigator-M3, drivers. This is only made complete with an on-disk mirror of the one and only CD-Deluxe.



## Disk doesn't load?

If your CD does not load correctly (DiskErrors or CDRead errors), it may indicate that the CD is faulty and it along with a RAM test, Amiga Magazine (8k Return, DiskErrors, T-Billion Court, Biscuit Industrial Park, Biscuit on the water, Gloucestershire GL4 2HQ).

Please note that some CDs will not work on systems other than CD32s, so try loading it from Workbench first. CD32s will work with almost all Amiga configurations and Macintoshes. However, we recommend older CD drives to be replaced where possible. A non-working program is not an indication of a faulty CD!



# Siamese

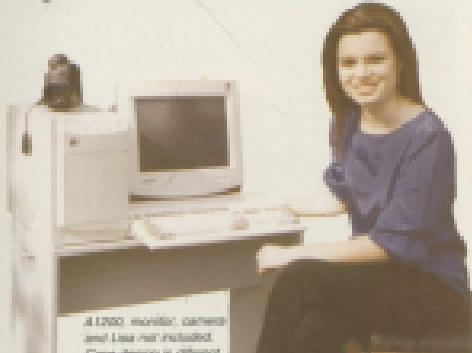
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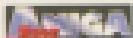
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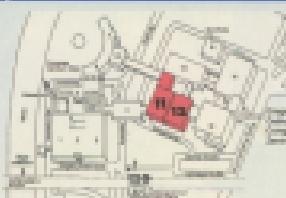
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# News

## Gateway 2000 – Progress at last

**A**t a few months' interval the Amiga business and growing international status from the Amiga community things are beginning to look very good for Gateway 2000 and Amiga International.

Gateway 2000 have set up another subsidiary called Amiga, Inc., which will be based in Canada. Running alongside the German-based Amiga International, this company will be primarily concerned with the future development of the Amiga, leaving the sales and marketing aspects of the operation to Petrus Technika and Amiga International.

The new General Manager of

Amiga Inc. is Jeff Schmidler, a Gateway 2000 man with a background in engineering and a knowledge of Commodore products. Amiga Inc. have started the hiring process and hope to have 30 staff in place and developing by Christmas. According to Petr Tschitscherenko there should be a new Whizbang 3.5" CD update released in the spring of next year at the latest, and new hardware by the winter of '90.

Initial development work will go into urgent updates of the OS, but there will, despite rumours to the contrary, be hardware developments. It has yet to be decided whether this hardware will be produced and sold by Amiga.

International or whether it will be licensed for construction to third party companies.

AI will be making their presence felt in the Comdex show in a big way, and from the 1st to the 18th of November, this German show has traditionally been the biggest Amiga show in the world. AI will have a large stand and hope to show off some newly licensed products. They will also hold a developer's conference, seminars and an exchange of ideas with Amiga companies, developers, and users.

A recent summit held by Amiga Inc. was attended by our US correspondent Jason Compton.

For full details see page 18.



## Golden Image get ConneXion

Golden Image are offering a new Zorro II themed solution, the ConneXion card. This 'reversing' solution provides a 10 base 2 (BNC) Ethernet link. Using the AUI interface, a standard AUI transceiver allows adaption to alternative standards such as 10 base T. The card comes with auto-booting ROM based software called Netware, negating the need to install separate drivers. Netware software can handle running on Amiga and DOS systems, with Windows, OS/2 and Novell versions under development. Basic file compatibility is also provided, using additional software.

The ConneXion card runs at a staggering 10Mbps per second, but benefits from a 256 on board cache reduces CPU overheads. The card is available now for £175. Call Golden Image on +44 (0111) 800 8291.



## Micronik North American distribution announced

Micronik of Germany, suddenly a super high profile Amiga licensee, has chosen 'North American' Distributors for its new Amiga clones. According to sources within Micronik, Paxton Corp. and ISPM have been selected. Both companies plan to offer direct sales as well as dealer channel sourcing.

The move should finally bring reasonably-priced Amiga tower systems to the US and Canada. While tower kit imports have been done in the past, they have typically been in very short supply and expensive. ISPM projected prices between \$1200 and \$1600 for the Micronik units, depending on configuration.

Paxton Paxton online at [www.paxton.com](http://www.paxton.com). ISPM are at [www.gate90.com](http://www.gate90.com). And Software Hot at [www.softwarehot.com](http://www.softwarehot.com).



## Magazine shake-up: Two titles close

### CU Amiga becomes UK's biggest seller

There has been mixed news on the Amiga magazine front. The last month has seen the closure of two more UK Amiga magazines, Amiga Review, the bi-monthly and Amiga Mail, under only Amiga, and Amiga Computing, the glossy bi-monthly title which for as long was a valued alternative to the big two of CU Amiga and Amiga Power.

Amiga Computing's demise has been widely attributed to their decision to stick to floppy disk only cover media. Editor Neil Molyneux told us that he felt the management had not taken enough steps to make the title competitive in a market which has become increasingly difficult. Apparently AC had been losing about 8,000 copies a month and running at a small profit, but publishers IGO considered it time to move on to more profitable areas. Amiga Computing was held in high regard at CU Amiga, and we're sorry to see it go. Our best wishes for the future go to all at AC.

On a more positive note, the latest official circulation figures for UK

magazines have been published by the ABC, marketing organisation. The last month has seen the closure of two more UK Amiga magazines, Amiga Review, the bi-monthly and Amiga Mail, under only Amiga, and Amiga Computing, the glossy bi-monthly title which for as long was a valued alternative to the big two of CU Amiga and Amiga Power.

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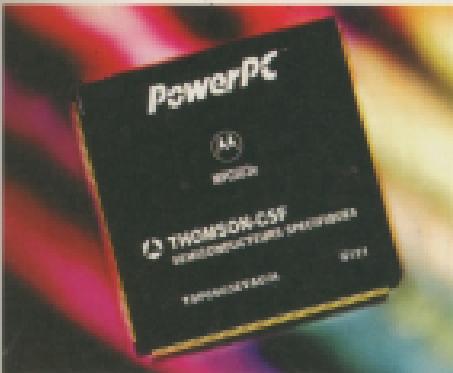
## PPC gets even faster!

New 'transistor' manufacturing processes have allowed Motorola to offer the PPC604e chip to run at an amazing 320MHz.

The 320MHz version of this chip is at the heart of the core of the range PPC boards from Phaez, and although they have not yet made any statement on this matter, it seems likely that they will support this chip in the future. Assuming a megabyte of L2 cache, the 804c/805

is benchmarked at an amazing 14.8 SPEC95, and 8.0 SPEC92, making it the fastest high-volume CPU available today.

Also announced is the new low power consumption PPC750/750i40 series of processors. Utilising an integrated level 2 cache controller, and 200MHz data and instruction caches, the 200MHz 750 is rated at an estimated 12.4 SPEC95 and 6.4 SPEC92.



## Made for Kids

Microtique software has announced an initiative to promote the use of the Amiga as a family computing platform by encouraging and organising support for software aimed at children. The web site can be visited at <http://www.microtique.com/madeforkids.html>. The main aims of the initiative for KIDS project are to:

- Gather together a range of quality Amiga Software for children
- Make this range available through a new section of the Amiga - madeforkids
- Promote use and development of Amiga software for children
- Encourage next generation Amiga computer users with the PC as a family computer



## Imagine add-on released

GDC publishing have recently announced the imminent release of Imagine3D, which is an add-on for the popular Imagine rendering package. Combining a broad selection of presets and templates, Imagine3D promises to significantly improve the often criticised rendering environment of Imagine.

Designed to be compatible with all versions of Imagine, Imagine3D contains features such as a scatter panel to allow user selection of groups, objects, faces and points, including multiple selection, and two quick rendering presets called 'pixel bounces' designed for ultra fast previews.

Imagine3D will be sold direct from GDC publishing for £24.99 including a full manual with a leather look binding. As an introductory offer, GDC are offering Imagine3D to their first 2000 customers at a discount £15. Expect to see a review of this product in the near future.

GDC Publishing can be contacted by post at: 71 Holme Lane, Whetstone, London, NW1 8ED, UK or by telephone on +44 (0)1492 500817.

## News in Brief

### Weld Science sell clones

Weld Science's new hardware division has opened, selling an assortment of accelerators, CD-ROM drives, towers and add-ins for Amiga users on the upgrade path. Amongst products are the new range of tower Amiga clones from Microtique. The 1300 is priced at £249.99, the 1400 at £269.99 and 2000 at £309.99. Weld Science sell these towers with a 8-speed CD-ROM drive and a 110gb hard drive for an extra £15. Weld Science can be contacted on +44 (0)116 246 2800.

### Click4000M introduce on-line shopping

Click4000M's parent company, PCL computers, has introduced an 'on-line shopping mall' from which internet users can purchase the company's products and a select range of other titles. The on-line based mall was introduced in response to the problems Amiga users worldwide have in locating products. Click4000M promise promotions and competitions for visitors to their website. Click4000M can be found at <http://www.click4000m.com>.

### Vulcan open US branch

Vulcan software have opened a US branch to cope with North American distribution of their game titles. Vulcan, the games company behind the Battletoads series and titles such as Millenium, Jet Pilot, Starwars and Starwars: ALC are expecting to release some major titles over the next few months. Contact Vulcan UK on +44 (0)171 570000 and Vulcan America on +1-800-426-7887.

### Sidewinder CD price shock!

Sidewinder has cut the price on direct sales of his Future Shock II CD to \$10, plus \$3 shipping worldwide. The 74-minute disc has a mix of his favourites and more popular tunes, including the title track to the shareware game *Reservoir Tanks*. Sidewinder has had his music played at dance clubs due to the techno nature of his music and at rock bars (as he's wearing a cowboy hat in the back cover). CDs are in limited supply at this low price. Contact Sidewinder Productions, 6671 Cape Valley, San Antonio, TX 78227 USA.





# Amiga, Inc. Summit

In mid-August, Gateway 2000's new subsidiary Amiga, Inc. held a summit at Gateway's USA headquarters. Our US correspondent Jason Compton was invited to attend this historic event.

**J**eff Schindler, General Manager of Amiga, Inc., the new wholly-owned subsidiary of Gateway 2000, is a man who knows how to listen. Jeff, along with Peter Tschentscher and Schindler's assistant James Tippens, hosted a summit with senior road members of the Amiga design community.

The bulk of the guests were from the ICOM, the Industry Council of the Open Amiga. This group is an independent body set up to promote a series of standards with the hope that they'll assist division and even diversification in the Amiga industry. Gateway 2000 has shown a lot of interest in the ICOM and, if nothing else, this summit will show that the new owners of the Amiga are more than willing to listen.

Of the seven guests, four were directors of the ICOM, one was Amiga's unofficial first engineer, and one was our man in America, Jason Compton, editor of Amiga Report Magazine. Jason takes up the story.

## Cast of characters

"Some of the names will be immediately recognizable by Amiga fans - Arch Rokicki, of Commodore-era AmigaOS development fame and Dean R. Brown, the CEO of American Amiga hardware manufacturer ORB - were the invited standards. Alan Pender, Vice President of Fine Development software, Jess McDonald, a leading engineer, and Pecco Moss, a contract interim designer rounded out the group of five.

The final addition might be the least famous, Joe Tore - a hardware engineer who has worked for a number of firms, most recently Novellus Atlanta - is unofficially Amiga, Inc.'s first raster guru on the engineering team. Joe has designed custom accelerators for Atlanta and AmigaPro's professionals around the EDO and C64 chips, including multi-PPU configurations for supersoft rendering.

I spent a lot of time with Joe over the weekend, as new names already accustomed from my involvement with the Amiga Atlanta user group. Joe has a great deal of vision for the Amiga, and a lot of respect for his past. So much, that he pointed out instances of "inherent" losing battles - apparently, Joe has the specs of the first losing ball from Cole Luke, who created the logo.

Another name that might need some introduction is Jeff Schindler. As the head of Amiga, Inc., he will be deciding the future course of the Amiga, so we will all be listening a lot about him over the coming months. He has been something of a question mark, so here's the \$60,000 originally an engineer, Jeff Schindler worked in computer sales in the early 80s, covering Commodore 64, 128 and 64 computers.

The highlight of his tenure with

Gateway was successful leadership of the team that designed the Destination log-screen. By PC-logic it is marketing play if you will, but the Destination, bundled with a high-quality TVmonitor and full stereo sound, has gone over very well with people looking for a classy family PC. Now that the cast is in place, let's get back to Jason.

While I was not a part of the ICOM meeting with Gateway (excused), I was involved in an informal marketing discussion with Peter, James, and Jeff Amiga, Inc. head Dennis Lyle, I ate help the group brainstorming session. Amiga, Inc. and the ICOM were in fact very close together, and from what I gathered, they left very confident that this would happen in the near future. They seemed impressed by the advanced levels of planning at Amiga, Inc. - proving once again

that even if they don't collaborate you with press releases, a company can really have them all together.

## Big building

James Tippens invited all of us to a first-hand look at the new Amiga facilities. Anyone who needed convincing about the commitment the new company would have been pleased with what we saw. The first office will be nothing special - two large rooms plus a lounge on the second floor of a two-story office building located in the "Gateway park". No windows, overhead fluorescent lighting, but it is being made livable. I set up the office's first Amiga, a sleek AT 200 with a 13" kitchen colour TV as a temporary configuration. In say the least.

Projected for October 1st completion is what can only be called "the big building". Amiga, Inc. was able to get a lease of 300 of the building for a song. It's a beautiful thing even in its half-finished state - lots of windows, very airy, and very visible from the highway, spurring a number of us to propose massive Amiga signs on the road.

On the Wednesday night, after the ICOM discussion left, I met with Steve Jones, who helped make the Amiga deal happen for Gateway. He wished us all well. The Amiga is still finding its footing with the new Amiga, Inc., but the people there are genuinely trying very hard to make things happen.

At one point, James Tippens expressed amazement at the amount of work required. Jeff had done to get Amiga, Inc. up and rolling more or less on their own - running around like chickens with our heads cut off - and wondered if probably also had it easier. I assured him that not. I had pretty much one company effort, big or small, always starts with a few people working like mad to create a clean corner together.

That's what I said, and I came away from there thinking that we're going to be in for something really good here! ■

Jason Compton



▲ From left to right - Joe Tore, Mike Astor, Pecco Moss (not in his real name), Dean, Jess McDonald and Andy Pender.



▲ Jeff Schindler takes the pose for a photo. His laptop like floppy only just goes up...



▲ Jeff Schindler on the table - a passing Peter tries to get into the idea of moving office.



# Now boarding...



You indeed! It's actually, finally, really here! **Tactical Fighter Experiment**, or TFX to its mates, is truly the most amazing action flight simulation your Amiga has ever seen, and it's all yours courtesy of CU Amiga Magazine.

**F**or those who just can't wait to get airborne there's a quickstart guide on page 12. You'll find more in-depth information on the following pages, but first, just what is TFX and how come we've given it to you?

Those with extremely good memories will recall TFX made its first appearance in CU Amiga back in May '93. You're forgiven for it having slipped your mind, as it was

called *Alpha* at the time. Its developers, DSI (not recently dissolved) had originally P-29 *Retaliator* (which later than planned), and *Alpha* was being touted as the first of a new generation of flight simulations. DSI told us it would be released in October, amazingly of course October 1993. Somewhat suspicious since the delays with P-29 *Retaliator*, we rather optimistically commented "but if we know DSI,

that's probably October 1995". Little did we know it would be October 1997 and it finally got its long-deserved release!

These initial feelings from DSI were enough to get us on a daytrip to their HQ in Farnham to find out more. I remember it well (they did, here by the way). There was hardly an Amiga in sight, but a PC in every desk in the large DSI office was running one version or another of TFX.

# TFX.

## Loading instructions

### Installing TFX from CD

Clicking on CD00112, you'll find the TFX archive. Inside you'll find three icons for TFX for different types of Amigas. The TFX\_80000 version will work on any Amiga as if the other versions don't, then try this one.

However, the other two versions will be faster if you have a math co-processor aka FPU or 8086 or a 80486 based Amiga. If you have a math co-processor, the TFX\_FPU version should be much quicker as all TFX\_840 and 80486 based Amigas.

There's a config icon for setting up the control device and control levels etc. Installing TFX is completely itself. You can either run the provided TFX instance icon or drag the entire directory over to your hard drive. If you're doing the latter, you'll need 10Mb of hard drive space but you can delete the 300K floppy directory which is full of files.

Some were seeing the flight model, others were compiling new versions of specific scenarios, while others were simply shrugging off and playing the game.

Even though this was an PC based, TFX seemed as it would be considered look and learn to the Amiga with no loss of results, save for a slight clip in speed. At that time, the R.A.F was Commander's new best but not true to their forward thinking attitude, R.A.F never already confirming that TFX would be AKA only due to the high system requirements.

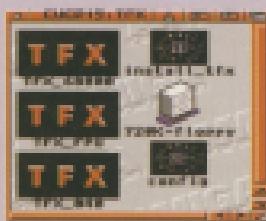
Back then, later down with screenshots, info, photos of the team and a whole load of expectations. Then we waited. We waited a bit more. Then we gave up waiting as it seemed the Amiga version was never going to appear. When asked why it was taking so long, the response came that through the Amiga conversion was 80% complete, the then popular 286/386 CPU just wasn't enough to do it justice. No Fast RAM and a 14MHz 80386 CPU just wouldn't compare to the Amiga's 486 PCs is was originally designed for, and that was that. Never mind, we had plenty more games to keep ourselves amused with. And then, it wasn't until things started to dry up on the Amiga game scene that people remembered the many generation flight sim they'd been promised a few years ago and started demanding answers. Demand for a release of TFX unanswered, but still nothing came from its proposed publishers. Until, we thought it was high time we stepped in to move the dust of this event before any masterpiece.



### Installing from a PC

If you're using a PC to access our CD-ROM, we've provided a TFX archive already split into 2004 chunks. On the Amiga you will have this mounted as read PC formatted CD floppy disks (usually obtained by dragging the PCD icon from 'diskchange/Mounters' to desktop, drives/ drives or just clicking on it).

Copy everything from this archive to floppy disks on the PC. Then copy all of the files to somewhere on your hard drive on the Amiga. At the end, rename the



Whether you've been waiting for this game since the last day, or you've never even heard of it before or is totally irrelevant. At least it will be once you start playing.

TFX is a flight simulation for everyone. It's got all the realism you could ask for and nothing that'll make your palms sweat too much. Above all it's got an atmosphere like no other game in the world. You might well think that because it was never released, the game probably has holes all over it, with unfinished business here and corners cut there. Not a bit of it.

This is a complete, fully fledged flight combat simulation with a full range of missions, five conflict theatres and various different options to take you from a rookie in training school to a seasoned and decorated top gun.

If you're the type of person who likes instant gratification and can't be bothered with all the bumps that surrounds most simulations, then you'll really love the Arcade mode. That drops you right into the thick of the action and tests your dogfighting skills to the maximum.

On the other hand, maybe you prefer to



unpack.inf to unpack.inf and you should be able to see an Unpack icon. Click on the icon and TFX will then be extracted to your hard drive. You can then delete the temporary files.

### Installing from floppy disk



If you bought the floppy issue, you can obtain TFX in no less than seven floppy disks for the bargain price of £20.99 + £2.99 P&P. See page 7 for the full details.

When you've obtained the floppy disk page, click 7 is the installer disk. Insert this disk and run the install icon. You'll be prompted as the installer joins up the data from all the floppy disks and then uncompresses it all.

You will need about 8Mb of hard drive space free and then you'll have a game much the same as the CD version with the three TFX launching icons as detailed in the CD section here. Enjoy!

get nice and comfortable with a cup of tea, plan a route on your map and then take to the skies for a good day's flying and a touch of sight seeing.

No problem. There's the Simulation mode for you, which gives you the option to select any of the five varied scenarios and puts you into a 'no comment' menu mission which can be played either as a one off, or even completely ignored in favour of taking in the some of the scenes.

Perhaps you like to sign yourself over to the airborne armed forces and dedicate yourself to the pursuit of peace? OK, well how about the Tour of Duty, in which you'll be fully trained and then sent out on a long string of missions as a UN peace keeper, seeing the beauty of the world and then blowing it sky high. Whatever type of player that you are, TFX is definitely going to give you hours, if not years of satisfying and engrossing gameplay.

So, all that's left to do now is get stuck into the action!



Continued overleaf





# Quickstart Guide

## Getting started

Press the right mouse button to skip past the credits and on to the test options screen. This gives you the choice of creating a new pilot or continuing a previously saved game.

### Create a new pilot

The first thing to do then, is enter your full name and your call sign – a nickname that's used for clearer communication. Next you need to select a pilot's name and for your new alter ego. Double click any of the bank caps. You can now take your pick from the list of five game types. Arcade mode drops you into a dogfight situation for some instant action. Training is the sensible option and the one that starts you off on your career as a top gun pilot. This transports you into the game and acts as a kind of qualifying stage for the real deal missions.

The simulator option is good for checking out the five different scenarios: Europe, Middle East, Africa, West Africa and Central America. This also gives you the option of selecting six different weather and time settings. The cloudy scenario has real cloud cover – try flying up



through it to the blue sky above. The night time and storm settings are surprisingly realistic too. You'll find plenty of things to do here but won't have any hard and fast missions to carry out. Tour of Duty is reserved for those who have passed through the training ranks. Finally there's Fast Patrol, which also requires training to have been completed. Training might sound a bit boring but it's not, and it's worth earning your wings at soon as possible so as to get on with the fun of it all. You'll also find the training schedule is quite addictive, with a variety of new missions to be taken care of, based on various scenarios.



### Load previous game

You can take a short cut into a full game by selecting Load Previous Game from the initial options screen. This allows you to select one of a few previously saved game positions from click. Select one of the '00s – Inferno – Tuscaron' data to be dropped straight into a 'Hot'. You'll have the mission briefing displayed for a short time only, so make sure you jot down the basic gist of the mission and any co-pilots that are mentioned. Watch out for further messages and updates appearing on the scrolling text display in the cockpit. These also appear on external views.

## Taking off

Getting airborne is pretty easy until you know what to do, but knowing what to do before you've left the runway can be a bit mind-boggling, not to mention annoying at first. Follow these steps:

1. Turn on both engines (R and L keys).
2. Increase thrust using the + key.
3. Dragpage when in auto (W).
4. Proceed along runway to gain speed.
5. Lift nose gently at speed 100.
6. Pull up the landing gear (T).



## Picking off bogies

If there's one essential skill you need for TFX, this is it. Fortunately the first training mission drops you into what is virtually a no-loss situation to get you into the swing of things. Your armful of anti-air missiles brings a clinical edge to the proceedings, although once you get into a real dogfight situation you'll find it's not quite as simple as it was in training.

Not all the weapons work exactly like this, but here's a basic guide to shooting up the enemy with a guided missile launched from the Eurofighter.



► Pull out a bogie and get on his tail with the help of your radar. Line up the red tag at the top.



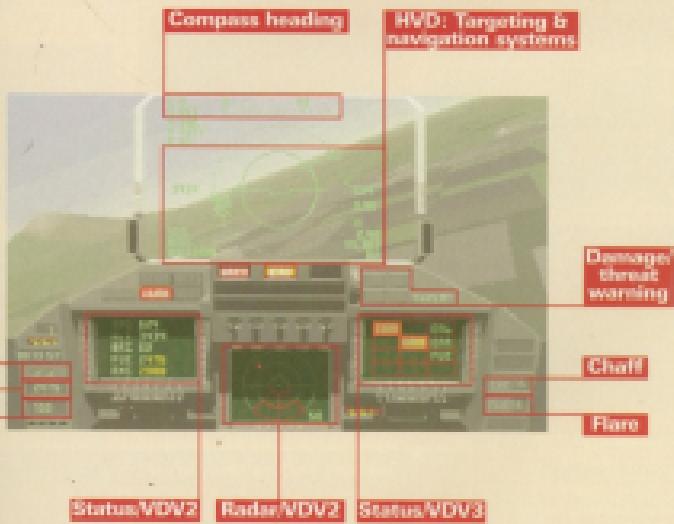
► Select an appropriate missile (Retent) and fire in your sights as the radar gets a lock.



## TFX Keyboard controls

Escape	Eject/Exit	2	VDU 2 display	1	Engines 1 on/off
F keys	Views	3	VDU 2 display	1	Engines 2 on/off
W	Coastalt	4	Save game position	Return	Weapons select
A	Virtual cockpit left	5	Auto-attack pressure	6	Autopilot
S	Virtual cockpit right	6	Decrease threat	7	Health
D	Front view	7	Increase threat	8	Landing gear
Q	Tracking camera 1	8/Space	Ground target	9	Head
E	Player tracking camera	Tab	Auto recovery	L	Landing system
R	Tracking camera 2	Shift +Q	Out	M	Air brakes
F1	Missile view	W	Wheel brakes	M	Map
F2	Engines view	E	Radar scaling	P	Missle power
F3	Virtual cockpit centre	T	Time warp	Q	Cockpit up
F4	Settings	U	Information	R	Cockpit down
F5	NDU 1 display	V	Pause	F1	PAL/TITIC
		W	Help		

## The TFX Cockpit



▲ Before the buyer takes off the hook, for this buyer it will be a matter of up the买方's entrance.



▲ The missile view is track its target as it moves and locking focus is on its target.



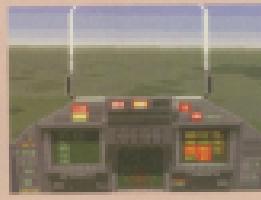
▲ Put yourself on the back as the buyer takes a lot and drops into a flaming element rapid of down.



# Configuration

## Detail settings

You can change the amount of detail in a number of ways in order to get the best trade-off between speed and visuals. Press the **Alt** key (above Tab) to access the configuration menu. From here you can make a few general set-up changes, such as joystick sensitivity, music, sound effects, world detail and the flight model. Click the **Detail Menu** button to change specific aspects of the display. This allows you to specify the graduation of the sky rendering, turn texture maps on or off, enable or disable ground shading and decide whether the weapons will be visible under the plane. You can also choose whether to have the different weapon maps from one to the next or to have the weapons pass to the next view. By raising all the detail levels up to maximum at first, then if you would like some more speed, take out the aspects that you think are the least important.



## Virtual cockpit

One of the many innovations in *TF2* is the virtual cockpit. This gives you a feeling of actually being there that's just not possible with the usual fixed perspective cockpit views associated with the *F2/F3* days. It allows you to look around from left to right as you would be able to if you were sitting there yourself. Turn the texture maps off if it causes the game to run too slowly.

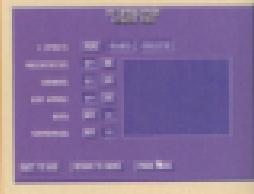


## Cockpit and exterior views

No decent flight sim would be complete without a range of different view points, and *TF2* has a stack of them. *Arwing* before has an Arwing flight sim had such detailed and realistic planes, and consequently these are the best exterior views you're ever likely to see in an Arwing flight sim! You can switch from one to another using the function keys. As well as being good to look at and impressing your mates, with hopefully the PII flying view which comes complete with "swishy" sound effects, these are often very useful for getting a better idea of your surroundings. The rear view comes in especially handy for shooting at a ground installation you've just reduced to rubble as you plan off up into the sky, or at least checking that you've hit the target on a close-range ground-based attack.

## Realism settings

Not to be confused with the graphical detail settings, the realism settings control how harsh or forgiving the game is. These are reached via the same overall configuration menu that leads to the details options. For example, you can set the game up so that it's impossible to crash. In the real world, flying at high speed with your landing gear down would damage them, if not rip them off altogether, but you can opt for unrealistically landing gear. There's variable wind, rain and temperature conditions too, which can be enabled or disabled. You could turn all of these off for a more arcade-style affair, or to make the game more playable for anyone less proficient at flight sims. Turning off crashing is a bit of a cop out, but can be useful if you find yourself continually plummeting earthwards.







# Know your hardware

## Navigation and tracking

All the planes come complete with advanced tracking devices and maps of the areas in which your missions take place. It's essential that you know how to read and use these devices if you're to be able to find your way back home after a successful mission.

You can view the maps opposite at any time by pressing **Map**. The maps you'll see in the game also show blips to indicate friendly and enemy activity. The green and blue blips are friendly, while the orange ones show up as red. Flashing red dots indicate primary targets. You'll often be given a grid reference during the mission briefing to tell you where your target lies. Check the grids overlaid on the maps opposite for a quick idea of where you should be headed.

## Weapons

Your weapons fall into two basic categories: air-to-air and air-to-ground. Use the **Right Joy** to cycle through your air-to-air missiles and use the **Backspace** key to activate air-to-ground weapons. You also have a weapon for when all else fails. This can be used to shoot down planes and also to destroy ground-based targets, but ammunition is limited and so is its range.

If you have a target in view, the cur-



rently selected weapon will attempt to lock on to it. You'll know if you've got a lock with an air-to-air missile as the floating diamond on the HUD will spin up with the square around the target. You should also hear over in-board computer annunciation that it's "locking." The air-to-ground weapons work in a similar way. If you don't get a lock on your ground target for any reason, a bit of sharp shooting with the curser will usually do the trick.

Once you've got your lock you can hit the **Spacebar** to the sound of "Missile away!" from your friendly in-flight computer. If you don't need to take any immediate evasive action you could switch to the enemy view or even better, the missile view to watch it home.

Getting a lock doesn't necessarily mean you'll get a clean hit. A good lot of flying from the enemy can shake off a missile, although the missiles themselves don't give up without a fight!

## Compass bearings



Your Head Up Display (HUD) includes a compass to show which way you are facing. 0 degrees is North, 90 degrees is East, 180 degrees is South and 270 degrees is West.

## Arming your plane



You can scroll through the arms on the right, then drag and drop them on the plane to load up manually. Alternatively use the **Default arming button**.

### Lockheed F-22



An incredibly versatile plane, the Lockheed F-22 was designed to scramble from both land and sea aircraft carriers as and when required. Its strike potential is equally varied with the ability to take out air and land-based targets with a range of modern "fire and forget" missiles and bombs. While not the most attractive of the three in after, it's the only one capable of sea-based missions.

### F-117A Stealth Fighter



The famous F-117A Stealth Fighter also comes from the Lockheed camp, and marked a significant step forward in stealth technology. It has since spawned the stealth bomber, which was used most publicly in the Gulf war, with the precision of its air-ground strikes making headlines. Although harder to detect than other planes, the F-117A is by no means totally invisible.

### Eurofighter



Based on the French Mirage jet, the Eurofighter 2000 was commissioned as a cost effective state of the art jet fighter for European security. Like the Lockheed it too is very versatile in its ability to carry out a wide variety of strikes effectively. It also offers stealth properties, with short take off and landing abilities, high agility and extremely configurable payload options.

# Maps

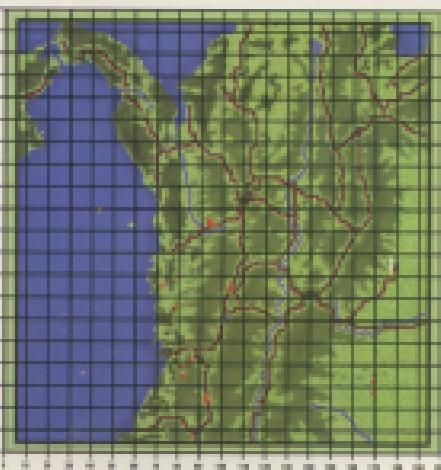
To help you get about in your missions we've included maps of all the areas, complete with grid references that don't appear in the game.



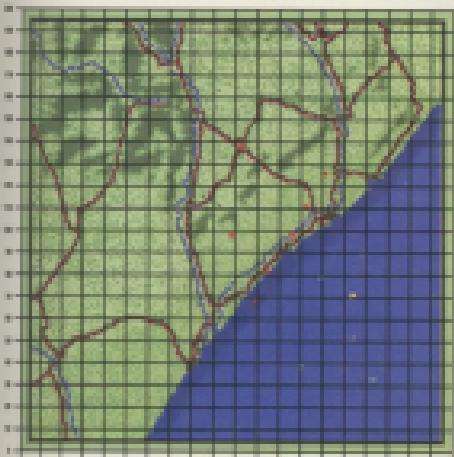
Europe



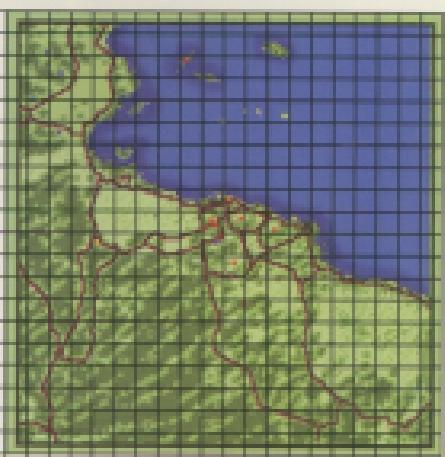
Central America



West Africa



North Africa



Continued on page 279



# Technique and Tips



## Landing

The initial training missions don't require you to actually land your plane before you've hit your targets, but once you get further down the line, and also in the 'Tour of Duty' you'll need to return to your surface or your aircraft carrier to complete the mission. Landing is a tricky business. You can't just go hunting towards the strip and hope that slamming the anchors on at the last minute is going to be enough. So let's take a look at landing on an aircraft carrier.

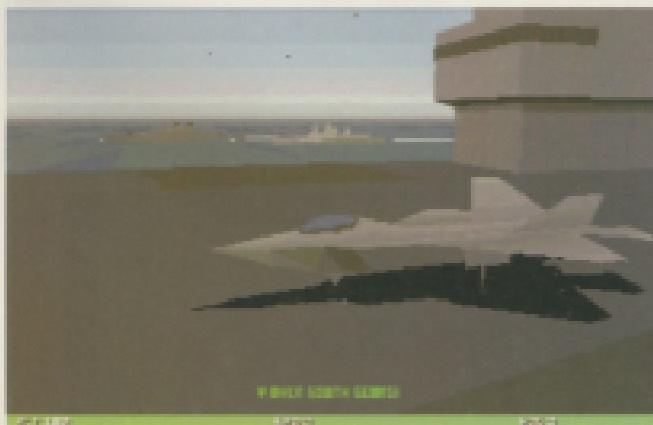
The first thing to do is get lined up with the strip. One of the best ways to do this is to take a flight over the aircraft in order to get a good look at the runway. Once you know the lay of the land, get some distance between yourself and the runway using the 'Surveying' function if you're impatient and then turn back and level up with the runway. Take your altitude down to around 1000 feet and hold it steady. As you get closer, put the



throttle on and reduce the thrust to about 60%. If you don't use the pitchup you run the risk of stalling the plane. Head just the nose down slightly and start the final descent. Remember to put the landing gear down at this stage. Aim to make contact with the runway at an relatively an angle as possible, and once you've touched down, pull the return buttons in and out the thrust slowly. The plane should come to a halt, safe and sound in terra firma.

## Carrier landings

Now this is a bit more difficult. Just about



all of the land-based procedure applies here, but now you have a much shorter landing strip, and you also have to contend with it being stuck in the middle of the sea. Judging the correct descent altitude is the hardest thing here. As before, buzzing the aircraft carrier is helpful, if for no other reason than to make sure you're not attempting to land on one of the fleet's battlecruisers.

Since the danger of overshooting is obviously very high when you're landing on such a small area, you need to employ your 'hook' to bring the plane to a stop before it falls off the end of the strip. Remember to pull your hooks down when you lower the landing gear. Also beware of coming in too low and crashing into the end of the deck.

## Dogfighting techniques

It costs American taxpayers millions to send a pilot to the Top Gun Academy to learn to be a combat pilot. Here's the patented CU Aces tip version.

### The Immelman

A complex barrel roll loop which allows you to get the jump on your foes. CU Aces advocates not bothering.

### Covering Out Of The Sun

Another top gun move. Requires lots of sun tan lotion and good air conditioning. You much effort.

### Getting stuck in

Here this is the tactic for all the enemy, change in heading, sensors tracking, lasers released like there is no tomorrow and blow them out of the sky! Remember - it's only a game.

# The Best bits

In case you hadn't realised yet, TFX really is amazing! Here's a quick tour of some of the best and most unique bits of the game...

## Mountains

Now, we've all seen little pixelated hills before in the likes of *Warstep*, but you've never seen anything like these before: aneuploped peaks and extensive ranges of mountains and foothills give the landscapes more realism than ever before. They're not just there for show either. Make sure you set your sights on a waypoint and go off to make a rappel that you're not headed for a collision with one of them!

## Texture maps

How common on other platforms, texture mapping is still rarely seen on the Amiga outside of 3D modelling packages and PCD games. TFX uses them mainly for its visual cockpit, in which you can see limits and the target moves around your field of vision as you bank and climb through the skies. There's also a natty little UPS logo on the tail fin of the Eurofighter 2000.

## Gouraud shading

When combined with the models of the planes, the ground, buildings and the mountains, the shading gives everything a convincing, solidly made, missing-in-mass paper-dan-rightness. It's this which gives the mountain ranges with snow, creates realistic shadows behind the buildings and even brings the explosions to life.

## Clouds

You thought you'd seen clouds before, didn't you? Well we're not talking about two dimen-

sional polygons that sit up at 5,000 feet like some kind of major carpet. No, these are proper, real clouds made up of lots of little clouds. Go into a cockpit on a cloudy day and watch as your view fades to grey. Keep going a mile further and you'll emerge into the clear blue sky above.

## Night flights

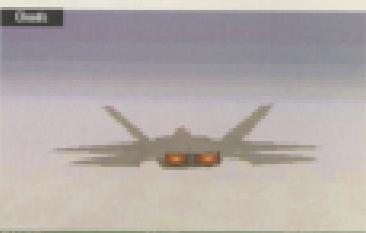
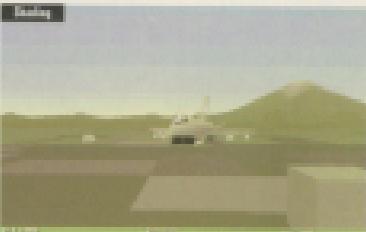
You might think that being assigned a night mission would be a bit tedious. Holding to one except the inky darkness, right? Well, that would be that in most flight sims, in which the screens consist of a plane, two roads and a shed. But TFX goes out of its way to bring you full illuminated cities. You could almost believe that you were flying over Las Vegas, except Las Vegas isn't one of the scenarios.

## Massive worlds

And another thing: there's over three million square miles of terrain and airspace to cover in the game, all taken from real official maps data. That adds up to 1800th of the world's surface area. There's islands, deserts, cities, rivers, bridges, roads, canyons... you just keep discovering more every time you play.

## Next Month

We'll be bringing you more hard facts and tips for this awesome game in next month's *CU Amiga Magazine*, so make sure you don't miss it.



## Screen Saver



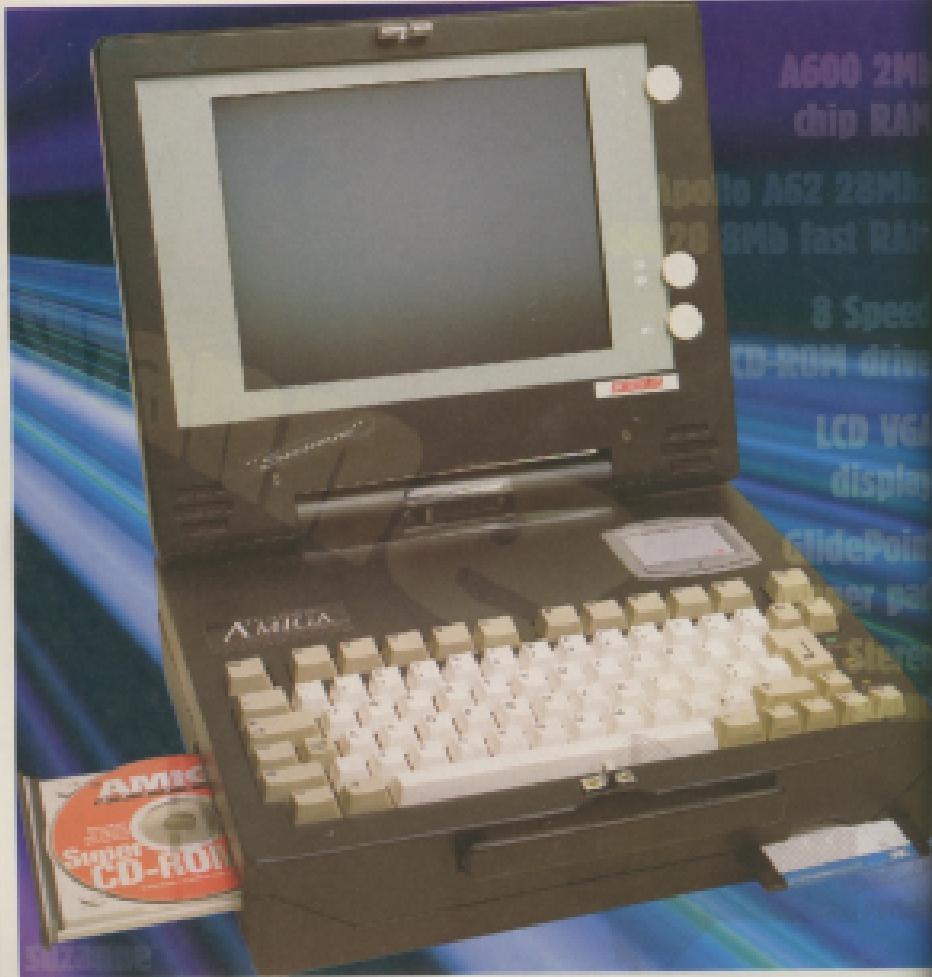




# Suzanne

## The Portable Amiga

This month's DIY Scene tells the story of one man's mission to construct a portable Amiga. Simon Archer recounts how he built 'Suzanne'.



**T**his feature follows in the trend of the DIY series, but is not intended as a 'How to build a portable Amiga' tutorial. The techniques involved are clearly well beyond the capabilities of most DIY computer Amiga users. However, they may be useful to readers wanting to modify their Amiga setups, as DIY 'tweaked' Amigas become more popular with Amiga owners.

Those who attended the recent 'World of Amiga' show in London may have been 'blown' by the DJ Amiga stand. There was a portable Amiga 4000 complete with its own power supply but no battery, LCD monitor, CD-ROM, stereo sound, 80002 accelerator and keyboard (replaced by a mouse) replacement. This would be impressive enough coming from a commercial company like the mythical M4000 system but it verges on legendary given that it's one man's part-time DIY project.

Samuel's creator, Simon Archer, gives his account of how he constructed 'Samurai'.

### Samurai to the rescue

The idea of building a portable Amiga was one that I've always been keen on and the AmiD (Amiga 1200) of a Macintosh 1200/1300 monitor seemed a very good starting point. The next step was to decide which Amiga is to be used based around. Because of its size and the fact that they were easy to obtain, the 4000 seemed a likely choice.

So much began considering up the components. A quick scan of Amiga revealed the plan to connect up a VGA monitor to the Amiga's 20 pin video port. After constructing the socket and connecting the monitor, it didn't show a PAL screen. After a quick monitor driver change to MULTICAM

adjusting and palette adjustment, finally it did. It was necessary to alter the palette settings as the 0.000 displayed some rather odd 'Unchromatic' with the default palette settings. Chromaticism is caused by two S-video cables being placed next to each

other resulting in interference at the join of the cables. Slight adjustments at a time were made to achieve the optimum display. This was a critical step in the project, because if this stage hadn't worked then the whole thing would have been a waste of time and effort.

So the setup now consisted of a monitor with power supply, AmiD with power supply, external disk drive, mouse and mouse mat. Handly portable! The monitor is not installed into a flight case, and it becomes a moveable object, albeit fragile. This installation lasted quite a while until the time came for a little more power and on the road. I took the decision to upgrade the machine with an Apollo 4020. This gave the machine a whole new lease of life but also quite a few headaches. The accelerator card is not one of the easiest cards to fit and once fitted it refused to stay fitted.

Because of the design of the AmiD, with its surface mounted technology, there is no real way to expand it. Apollo have got around this problem using a PLCC socket underneath the accelerator to plug in to the 80000. This doesn't work very well, as the socket keeps popping its relay free. Once the casing of the AmiD was put back together it was found that the pressure kept the board in place - not ideal, but it's solvable.

As this system was starting to grow into a phenomenal size, the time had come to

install all the collected components into a case, and power everything from one power supply. As the CD-ROM was being powered from the PC supply, this seemed the ideal option, as it was small and didn't need to be available on. Apollo had allowed you to power the Amiga from it. The monitor used a 12V DC supply so that was my problem. I had cut all the parts and work started on converting the PC supply to run all the components together.

All the components were now powered by the PC supply but it was just a mess of circuit boards piled up on the bench. It was time to start on a custom built case which would house all the parts neatly.

### CD Integration

When the machine was purchased, it came with a required SCSI interface, and I decided that this would be ideal to run a CD-ROM drive. I connected the required up to a Sony COU10A drive and a standard 2000W PC power supply was used to power the drive. The standard Commodore CD-Magnavox was used and it was up and running in minutes. One problem arose, as a result of having the Sealed hanging out of the PCMCIA port and requiring an extra power supply, the machine wouldn't fit back into its flight case. Since relocating the Sealed was impossible, I contacted Miklos.

They made the suggestion that they could supply me a case in 'kit form' so that it could be built to suit. This removed the need of a bundle as the SCSI concept was abandoned. Having seen ATAPI software available on Amiga, the concept changed to incorporate an IDE CD-ROM drive.

This seemed a much better idea, as there would be no need for extra interfaces to try and squeeze inside. As a speed SCSI device was very reasonably quick but to problematic with cables. At the time, connector PCIs were not available to allow 1.5" drives to be connected to the high density connector inside the Amiga. The only option open was an adapter card but this was not long enough to reach the drive in the new case.

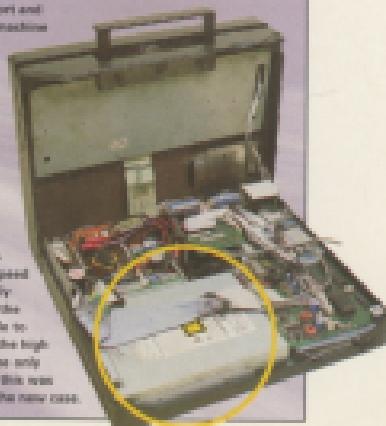
■ The Apollo 4020 accelerator complicated the entire process. The keyboard had to be revised in order to make space.

### Specifications

AmiD (Amiga 1200) with its own power supply
Apollo 4020 with its own power supply
Apollo 4020 SCSI
CD-ROM
2000W power supply
80002 accelerator



▲ Samuels became the centre of attention at Amiga's stand at the World of Amiga show.



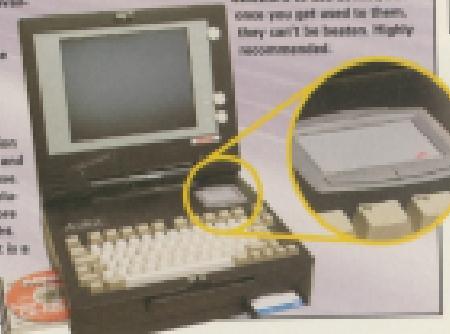
## Glidespoint fingermouse

The idea was to have a trackball device inside the casing, so there would be no need for carrying an external input device such as a mouse. This turned out not to be. Physically there wasn't enough room to fit it unless the trackball itself was about 1/4" in diameter. A quick scan of the advertisements in *C71 Amiga* showed that an item known as a 'Glidespoint' was available.

The type of input device used on the Amiga PCs notebooks and so is extremely small. The 'Glidespoint' required connection to the serial port and replaced the mouse. It was an ideal solution, being no more than 1/4" in height. As the Glidespoint is a serial device it meant losing the serial port

of the A4000. It was either that or have no input device. Fitted into the small space at the rear of the keyboard, it worked very well indeed.

I would definitely recommend use of these units to anyone looking for an alternative to a mouse. They are small, easy to set, there's no moving parts and they never need cleaning. They can be unhooked to use on their own, but once you get used to them, they can't be beaten. Highly recommended.



The A4000, the monitor and the power supply were all stripped down to their bare bones so that some initial dimensions could be attained.

A little jiggling around with the locations of some components revealed that it should all fit into an area about the size of the monitor panel. This was advantageous in as much that it kept some aspect ratio to the case, and did not present itself as being out of proportion (as some A4000 possible that I have seen). Obviously it is out of the scope of an article such as this to go into detail about the construction of the case itself, suffice to say that it required some basic sheet metal skills (Screws being needed here, it required sophisticated sheet metal skills (haha) and a few well chosen cutting tools).

## Cable capers

Once I'd chosen the physical location of the components, most of the leads needed to be stripped or modified. The first of these was the hard-drive lead. As an all A4000 and A1200 models, the IDE interface is of the high density 40-way type as found in most notebook portables. This is not a problem when connecting hard drives, but CD-RW drives are only available with the standard density 40-way connector as used on the 2.5" drives.

I modified the cable so that it would accept both types of header. As you can see in the picture, picture of cables this was accomplished by cutting the original cable in half. A length of 40-way standard pitch 12-core cable was spliced onto each end of the cable, making it longer and enabling the 40-way header to be compact onto the lead.

You can see the modification in the picture by the fact that of black heat shrink used to insulate the 40-way pitch.

In 40-way pitches, pins 43-44 carry the power for the drive, which is normally taken through the four core power connector on 2.5" mechanisms. These four lines were separated away from the rest leaving a length of cable 2" long with only 40 lines. The 40-way header was crimped on, leaving the last four to pass through to the 2.5" drive. Connection was made to test the setup, and after installing the software, everything was found to work straight off.

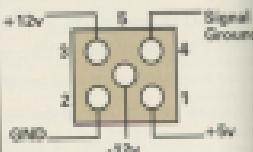
The 40-pin IDE must be compensated here, as is made

the job of installing the CD-RW so much easier. Ideally speaking, a buffered interface, like those now sold by EzyTech, should have been used in the installation of the CD drive but were not available at the time. That said, the connection of the drive straight to the IDE port has proved to be very reliable to date.

The monitor was next and proved to be easier than expected. The monitor has a display card inside that takes the incoming VGA signal and converts it into something the monitor can display. As this was a separate card,

## PC power supply wiring

All these supply rails are available from the motherboard connector.



The cables connecting to the monitor panel had to be extended. I used 0.7mm plain single-core cable and used heat shrink to insulate it. The originally crimped wires from the power adapter were also stripped out of its heat and modified onto the lead running to the display card.

With hindsight, a scandoubler should have been manufactured so that the native PAL version of the A4000 would have been produced in 1988. This would have allowed the use of all screen modes rather than having to promote to MULTISCAN. Productivity Matrix next time! There were also some controls for screen orientation, position and color (hue) - movement on the screen of the motion picture which had to be repositioned. These ended up mounted on a piece of veroboard and were made accessible in the side of the new case. The front buttons for brightness, invert and contrast were able to be left on the monitor panel and are nice and accessible in this position.

There was also a small circuit board that was a high voltage generator for the fluorescent backlight, and it was decided to mount this behind the monitor panel inside the PC. A quick test showed that everything was working OK. It proved far more convenient to test at each stage as it happened, rather



At these bars, the PC power rails have been removed from the case so that it is easy to fit the final screen in the back cover of the casing.

then to modify a dozen things then find out something doesn't work.

### Insulation factors

Luckily the data drive cable was long enough, though the power cables needed lengthening. The same technique was used on this lead as was used on the others. With a metal band around all these components, insulation was a prime factor.

Radio shield insulation was used extensively throughout the project in order to insulate any shorts that may have been potentially dangerous, or even fatal. Given the high voltages and currents available to the project, and the metal casing, good grounding was vital. An earth potential isn't good for a lot of electronic products, and desoldering and insulation was carried out at every available point.

The casing was originally intended to house a 3.5" hard drive, but with the problems encountered by heat dissipation from the power supply, this plan was changed. The original 3.5" hard disk was fitted, and the extra space freed up was used to house the cooling fins taken from the power supply. This had the main benefit of helping to cool down the Apollo card and memory.

I fitted all the pieces together to see any problems that may have popped up during development. It all seemed to go well until disaster struck. The whole case had been built but the pieces hadn't been measured with the Apollo card in place. Once this had been fitted to the motherboard it was impossible to fit the next halves of the case together with both the Apollo and the keyboard in place. Measurements had to be taken to enable a removal. The easy solution was to mount the keyboard on rails, which helped the keyboard drop into the case.

This led to it having a nice flat appearance, but didn't allow enough room, so the rails were then modified, and the keyboard angled up at the back. This gave just sufficient room to install the Apollo and also gave the keyboard a more, more natural feel as it seemed to lean toward you. This was one problem solved.

### Tidy it up

Not having much room left, I decided that the power supply should have some sound capability. This was in the form of a small kit available from a high street electronic shop.

Rated at 100Watt output, but by the Amiga sound output, it seems an overdrive to the range of actually being quiet loud. The two psu was fed into two 1.25" moving coil



speakers mounted in the lid just

below the monitor panel.

An external volume control was also needed as the sound level was just a bit too high to be comfortable so I mounted a sliding potentiometer onto the hinge of the case just below the monitor panel.

The last job was to take all the vacant sockets and relocate them to the rear of the case. This turned out to be straight forward - simply a matter of purchasing suitable and plugs and lengths of ribbon cable to extend the ports far enough. As these bases are screw on types, this stage of development was surprisingly quick. One finally got past the removal of the onboard mouse port. This had to be removed due to space restrictions, but was later reconnected on a length of multi-core cable and taken out in the back of the machine.

### Fabulous Fablon finish

There we have it, all we needed now was to finish the case to make it a little more pleasing to the eye. The original intention was to take it industrial coated but as time became more precious and the Amiga above got nearer, an alternative was imperative.

The final solution was to use black Fablon coating which was cut to shape and used to cover the bare metal construction. That just left some labels, which I ran up on a laser printer using Papertronics and covered in transparent Fablon to protect them.

■ **Conclusion**  
this collection of boards and parts conveniently neatly into the case built case.

All in all, the finished item is practical, robust and compact, if a little heavy. As an after thought it may have been possible to have made the power supply a lot more than being removable. This could then be replaced by a battery that could be used while out on the move. Once at home, the power supply could be installed and the full power achieved without a series of disconnections. Maybe something to think about on the next one, eh? Finally, no. Susanne left for sale.

Should anyone attempt to use the techniques outlined above, they do so at their own risk. Neither Simon Archer nor EU Amiga accept any responsibility for any loss, damage or injury caused from undertaking of the procedures detailed here. ■

**Simon Archer**

### Next Month

In next month's DIY Scene ... **ARM Link**. This is a unique project to drive remote controlled devices and uses remote control your Amiga to move your great lengths to simplify construction and we'll be providing the small printed circuit board (PCB) on the cover of every issue! Revolutionary or what?

### Suppliers:

Category	Supplier
CD/DVD Drive	Electronics
PSU	EU
Keyboard	Future Computing
RAM	Lowest Lead
CD media	Lowest Lead
Applix, cables, etc	Applix Electronics





Another good month for Amiga games sees the emergence of two potential classics, some timely re-releases from Guildhall and the first game in Vulcan's new Mega Series...



## Previews

- 38** OnEscapee interview
- 40** Shadow of the Third Moon
- 40** Street Racer



## Reviews

- 42** Civilization
- 43** Gunship 2000
- 43** Railroad Tycoon
- 44** Strangers AGA



## Tips & Guides

- 46** Tips Central



# Screen Scene

# OnEscapee

It has a name that no-one understands, graphics everyone drools over, and gameplay that's similar to *Another World*. Everyone's talking about it, but Andrew Korn listens to the guys who know.



When we first saw the screenshots of *OnEscapee* on the [www.onescapee.com](http://www.onescapee.com) website, we were intrigued. Obviously along the lines of the legendary *Phantasmagoria* and *Another World* from French software house Deltaplan, *OnEscapee* looked really rather nice. When we got our hands on a demo and saw the thing moving, our jaws dropped. The quality of animation, the effects, the sheer attention to detail signalled that we had a game in our hands that could really stand out, something that could be leading the way rather than following. We asked *OnEscapee*'s and *OnEscapee* developer *Invictus* just who they think they are taking up off the blue and doing something that looks so damn good.

"It's a strange story," *Atsas* tells us. "Our team was born when *Tomas* (my neighbour) and I decided to make a 3D game. I only knew (BASIC) and *Tomas*, who is the chief graphics man, had never even seen a mouse! We only had an A4000, but we found *Tomas* and started to develop a version with two teams of animals fighting each other with bows. Two things happened us developing it: we realised that using characters from *StarCraft* (nowhere is a cool idea, plus our Amiga couldn't display hardware sprites and an 8-bit video display all at once).

I don't know if you know the feeling, but it was very hard when we realised we would have to start again. We were desperate to do something, and had just started another game when the A4000 and A4400 came out, and we realised their capabilities and started developing *OnEscapee*.

Until starting *OnEscapee*, there were just the two of us at *Invictus*. We decided that we must have a producer because our physical skills weren't enough for a professional game, so *Lawrence Toff* joined. A year ago a



▲ The hero falls to his death in one of many spectacular and endlessly watchable spin moves. He can't make money that pay off skills and sheer life skills to reach one more deadly bonuses death...

PC programmer, *Laszlo Mihalanyi* joined, because many people asked for a PC version. Possibly, to speed up work more people joined: *Tomas Moller*, who does the rendered elements in the game, *Costas Karam* who helps *Tomas* with artwork and *Mani Lajani* with additional PC programming.

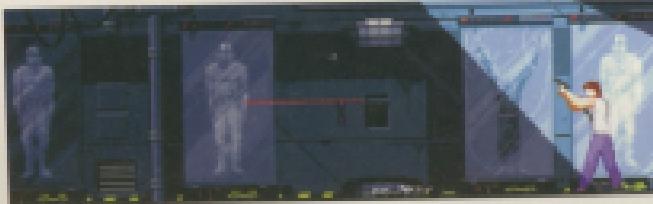
## That title explained!

The title *OnEscapee* is in fact a compound of the words 'hero' and 'escapism'. The hero is an escapee from alien kidnappers. The one is supposed to signify that he is the only escapee, to emphasise the 'one man against the world' theme. Certainly a bit more original than 'Descent of the Future', the first working title. Does the game live up to the originality of its name? We asked *Invictus* what *OnEscapee* had to offer than *Phantasmagoria* and *Another World* didn't.

Graphics master *Tomas* chips in. "Because it uses the 3D chips, the game can be 256-coloured without decreasing CPU power, so more and bigger animated elements can be included in *OnEscapee*. No one would turn their nose up at *Another World* with better graphics, but surely there must be more! *OnEscapee* is a 'Not just the graphics, the gameplay and the music' become better: you can listen to digitised music through all of the game. Some logic games are included too, some of which could be separate games. *OnEscapee* runs on standard screens, and can also be played with VRU monitors. We have decided to make a graphics card version of the game after we finish with the AGA."

What are they most proud of in *OnEscapee*? *Tomas* has a quick answer. "First of all I am proud of *Atsas'* work. He has made an excellent background, coordinated, and a new full-screen, packed animation by

■ It looks similar to *Another World* but *OnEscapee* offers some cool new body effects. The graphics below are screen captures from *OnEscapee*.





▲ One of the scenes you'll see as you try to help the hero escape from his captors. There is a lot to see, from distant references to Bedevvera like cities and high rock towers.

mag with which we can insert sound effects from [a] frame to make my work easier. Graphically, the fourth level is the one I am most pleased with. It is set on the streets and it is the biggest (about 100 screens), the hardest, the most...

### Amiga in Eastern Europe

OnEscape has a distinctly cyberpunk air to it. The main character – known only as The Hero – is in the cut from powerful alien beings. There is a mood of apocalyptic desolation in it reminiscent of other Eastern European science-fiction.

We started to hear a lot more from developers in Eastern European countries, and it is interesting to see the different sensibilities of creators from these countries. We asked Attila about the Amiga scene in Hungary. "We haven't paid attention to the Amiga before, and we're only now as the scene in Hungary is great and very helpful. There are many Amiga PC converts, making Java and more than 100 games!"

Damage! There are famous demo groups too such as Faculty, Therapy, Insane, Epsilon, CG1, Primo 18, and the Power Team.

Asked what they see in the Amiga, Damoc says, "While working on OnEscape, I have done some graphics for other companies on a Dual Pentium 1.33 system. It is very fast but I had a lot of problems with the OS. I came to realize that the Amiga is much bet-

ter. I don't like to work without the advantages of the Amiga. For developing graphics for a game like ours it is better".

OnEscape is due for a release later this year from Bedevvera Software, a company better known for



▲ If you like the screenshots, wait until you see them moving. Water ripples, reflections, colour changes with the seasons. If there is as much to do as there is to see, we are in for a treat.

making CD-ROMs noted for a high level of presentation. OnEscape is their second offering, the first being the Bettors inspired Foundation. There is an interesting similarity to the two games: Bedevvera have picked up, both being the sort of game which the

Amiga hardware is suited to. Following the trend for games shaded 3D-linear perspective 3D representations, these are games that Amiga can do, every bit as well as any other machine out there. With titles like these, the development teams creativity comes to the fore, rather than programming ability. Impressive, impressive.

It remains to be seen if OnEscape can be a success. There have been a shortage of games for the Amiga of late, and even more of a shortage of Amiga games that could make

games players on other platforms sit up and take notice. Could OnEscape be the first signs of a reversal of fortune for the Amiga? We'll have to wait and see.

Some more words on the Amiga: "A lot of people say the Amiga is dying. It's strange, they said that years ago and the Amiga is still

going, why? Because we keep it alive, with our friends, work, and love. So it depends on us, too, whether there will be great games or not". ■

▲ An example of the original design artwork used in the production of OnEscape.



# The Shadow of the Third Moon

■ DFB: September ■ Developer: Black Blade ■ Publisher: Titan / Bittersoft © 01998 261466

**I**nly has been associated with science-fiction before. Black Blade design, the human software house responsible for *Star M.*, clearly want to take on the role of the Leonardo of the Amiga game's renaissance. Considering the rate at which *Black Blade* design is headed by the unpredictable Francesco Leonardi, who takes up their 3D landscape creation like it was something really special. Fortunately it is.

Most engine games have been around for a while now. They offer a reasonably fair way of providing a kind of 3D pixel-based landscape, ideal for flight simulators. *MTS*, in Black Blade's version, or the *Mad* edition, as promised by Novamedia for the *Voxmathia 3D* system used in *Commander* on the PC. If you've seen this game or any of its descendants you'll have an fairly solid notion of what to expect. What you won't be expecting is how fast and smooth this system is.

Make no mistake, this engine is significantly smoother than anything *Commander* had to



offer, and given similarly matching CPU power, it makes the floor rock in no time.

*TSU/TM* really requires an 800 and a CD-ROM drive, but give it what it wants, and prepare to be amazed. Check out this screen shot, the eyes of the nice Amiga landscape. No, they're not the intro sequences, those are the in-game pre-plays. Plus there'll run at 13-15 frames per second and on the land of acceleration which costs less than a hundred pounds, *TSU/TM* isn't just pretty when it comes to the ground beneath your wings. The aircraft vehicles you will either fly or fight, see



▲ **These landscapes need to be, that's right, this isn't the intro sequence, this is the game itself. And it runs at 13-15 frames per second.**

Coupled with glossy high res rendered inter screens and some specially written music spoolcd from CD this is a feast for the senses. You have a good range of missions to be taking in an assortment of environments and some widely differing landscape types. Action is fast and fluid, and then what we've been for a while.

Prepare for major law-shipping action.  
Andrew Barn

# Street Racer

■ DFB: September ■ Developer: Ubisoft ■ Publisher: Goldhill / Epic © 01773 835781

**U**bisoft, the French development team behind a number of Amiga titles in years past, are having a final fling on the Amiga with this kids' related racer. Released some months ago on the PlayStation and PC to mid a little acclaim, and rather earlier on the SNES, this is the latest mainstream title to hit the Amiga in a long time.

*Street Racer* on the Amiga gives nothing away to versions on the other platforms. The graphics seem slightly better than on other versions, but are impressively detailed and beautifully designed. The courses are pretty simple flat affairs, with none of this hair-flecked hills and valleys stuff, but the graphics are all that much prettier for it and the whole thing does along at a break-neck pace.

*Street Racer* is a racing game written by people from another planet. An obvious inspiration is the brilliant *Mario Kart*, the game that made the SNES worth while. Unlike *Mario Kart*, authors of previous *Mario Kart* like *XTV*, Ubisoft clearly think that



▲ **Leading players, off! Isn't they fast...**



*Street Racer* is looking in the humorous silliness department, because they have taken it a whole new level. The main thing you'll pick up on is that the guys who drive these cars around seem to think absolutely nothing of smashing a hand out and giving one of the competing drivers a swift and mean slap in the face.

There are options aplenty to keep you amused if simply racing about isn't enough for you. There are various championship and

race options, and there is also the horrible option that allows you to take off the gloves and get really violent - there's even a soccer option. The game supports up to four players and promises serious multi-player laughs.

This bizarre *Street Fighter*/*Mario Kart* crossover should be ready for the road next month. Don't miss it! ■

Andrew Barn



# Civilization

■ Price: £14.99 ■ Publisher: Goldball  
■ Supplier: Epic Marketing © 01773 836781

Sure it's old, but it's about as much fun to play as games ever get. Now it's on CD...



**T**here aren't that many games that have been released over the years that can comfortably be called classics. Some leaders could possibly be called this, as could *Pharaoh*. But in the more enlightened times of the last eight years, there's been a real shortage of original and exciting games. Oh, that isn't to say that there haven't been great games. There just aren't that many games that could be released now in the same sort of enthusiasm and excitement as Sid Meier's incredible *Civilization* – the ultimate in God Games.

## Classic in the making

Like all classics, the concept is such a startlingly simple one, you wonder why no-one had thought of it before. But then again not everyone has the imagination of Sid Meier –

■ If you aren't exactly going to be blown away by the graphics, but they are functional enough and clear to see, it's the graphics that I find you need.



the man also responsible for *Monopoly*.

You start with a small band of people and limited resources. Your map extends only as far as the eye can see – the rest of the world is there to be discovered – and from that point you must travel the globe, advancing your people and your society, taking them through the technological and historical ages, until you reach the modern day. Believe me, it sounds a lot simpler than it is. Other civilizations grow up around you, and competition for world domination – hence to begin with – gets steadily stronger.

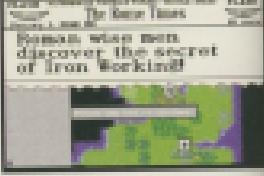
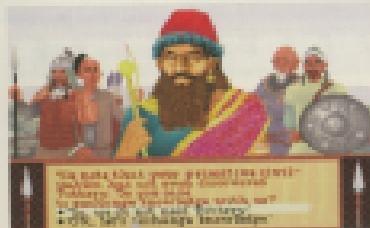
Initially the game is a little simplistic – a flashback to its VGA PC beginnings. Viewed from above, a simple tile-based map expand as you explore, with towns, people and items shown as roughly the same size as in the Ultima series. There are not many skills now and again to broaden everything up, but as your brain is going to be kept well and truly exercised in the game itself, the lack is hardly worth worrying about.

## Why all the excitement?

You might ask yourself, what's the fuss? The game has been released and re-released many times, so why should Amiga owners be getting excited over this one?

Interestingly enough, it's the first time this game has appeared on CD-ROM, and

■ You can interact with a variety of historical figures. I just wish Ramses could shut up about the stone pattern!



even more interesting it's the first Amiga CD-Rom title to be sold in the shops. Not a CD32 title that will run on an Amiga, but a bona fide Amiga game on CD-Rom. Could the small hole finally be turning? Are we to step out of real cortex and into high street heaven? Could be!

Putting someone to review a game like this in a page is like trying to explain *War and Peace* in a paragraph. The weighty, tall and enormous amount of content in the game would take half this magazine to explain, and the sheer subtlety of the game design is something you experience as you play it, rather than something that leaps out of you. This is not a game for the laid back set, as it will take some work to get into leading your civilization to success, but the rewards are more than evident. Ask the number of people who still play it, six years after its original release, or the number of people who still call Andrew and ask him how to get around the notorious hard drive installation routine of the original Amiga version, and they will tell you that this is a game you don't tire of.

The beauty of the game design means that even if you run out, you can jump right back to the start and play a completely different game, with different challenges and a whole host of new challenges. Perfection. There is no other word for it. ■

**Tony Dillon**

## CIVILIZATION CD-ROM

■ Released earlier this year	Rating
■ Number of disks	CD
■ Price	£14.99
■ Boxed or download	Boxed

**VERDICT**  
One of the best games ever produced



# Gunship 2000

■ Price: £7.99 ■ Publisher: Epic Marketing (01302 890000)

**N**ow this is what I call a flight simulator. None of your long distance transports and large-living here, just plain old close-up dogfighting - with modern weaponry, of course. The original Gunship still has to be one of my favourite games ever and I can't remember how many times I have played it on my trusty old Commodore 64. There have been many different helicopter simulators since then, but somehow these haven't been one with the same level of involvement or enjoyment as Gunship. This is, of course, until the release of Gunship 2000.

Originally designed for PCs, somehow these boffins at Microprose managed to make it run at a fast speed on the Amiga, so everyone could enjoy this stunning flight simulator - quite a feat on an unexpanded 4000. As with the original, the game is based upon the AH-64 Apache gunship, one of the most powerful fighting machines in the world. Like most Microprose games, you are based in a large area with a finite number of targets.

The game engine creates a series of missions by randomly selecting pairs of targets for you. There are no campaigns as such,



more of a continuous missile firing game.

One thing this game did do was to show the world that not all simulators had to be slow and boring. Gunship 2000 featured the most dynamic engine of its time, with realistic hills and valleys (just right for low level flying), then zooming over the top to take out a tank, the most intense action seen in a flight sim - you really did feel like you were flying the thing, and thanks to the random mission generator, the most varied missions seen yet.

One minute you were photographing an enemy installation, the next you were bomb-



ing a tank, or even

missed one of its appeal

a couple of years down the

line? No, this is still as exciting

as when it was released.

OK, it may not have flashy texture

mapping like TFX, but it's certainly

guaranteed to keep you up every night, from

now until Christmas. ■

Terry O'Brien

Editor

of

Amiga

Superstar

and

the

# Railroad Tycoon

■ Price: £7.99 ■ Publisher: Epic Marketing (01302 890000)

**O**K, apart from the people who created 'Southern Belle' for the ZX Spectrum, who could have thought that a game about trains that didn't involve running along one chomping at things, would be such a major success? That innovative old Sid Meier, that's who. Once again, he has a relatively simple concept - that of the train set - and then added a whole new layer by adding it in with City Folk, instant classic.

To explain, you are in charge of a railroad company, and like all these games you start with next to nothing, and your aim is to build it all up into something gigantic. You have all your standard game workers, a little money, and a small plot of land. With that you need to build stations in the places where people

are most likely to be, put more stations at places where people are most likely to want to go to, and then lay the track between them. The routes you select greatly affect the cost of building and the cost of running the service, which is all subsidised by passenger fares and other services such as mail trains. You have a huge map to cover, so you must plan wisely if you're ever going to tell us that InterCity network you always wanted - one with more than three smoking seats and not quite so many screaming children.

The interface is friendly, and building things simply a matter of pointing and clicking. The only downside is that the game is

## Abysmal installers

Railroad Tycoon and City have awful HD installers. Copy everything to the place you want it and install the fonts in your fonts folder. Check the names of the floppies (don't assume they're similar) and assign those names to where you installed the game. This lets Railroad Tycoon run on Amiga too, something it otherwise won't do.

ing, but it takes time to master - it's a difficult strategy game, and you'll need a business head to stand a chance to win.

All that's left to say is that it's still an excellent title. This kind of game doesn't age - the challenge is still as fresh now as it always was. If you don't have it yet, what are you waiting for? ■

Terry O'Brien

Editor ■ Game ■ Review ■ Available ■ Price ■

■ Released earlier	Amiga
■ Released later	Amiga
■ Available	Amiga
■ Price	£9.99

90%

**The Baby Sitter**

Between Gold Starred  
New Look Uncovered!  
Prosperity in Solidit



# The Strangers

■ Price: £24.95 ■ Publisher: Vulcan Software © 91 705 670 269

Finding life a bit too safe and cosy? What you need is a bit of brutal street violence with guns, blood, decapitation sequences and a multi-player option.



Has the gaming world gone easy-terr the likes of *Postal*, *Blockade*, *Tasker* and *Street Fighter EX*, responders in their feature mapped polygon violence, back at the ranch, Vulcan continue to uphold the nature of the Amiga games scene with *Strangers AGA*. It's got violence, fancy 3D type animation and more options than you can keep track of... but is that enough?

This game AGA is a CD only game. The authors will have realized it's for AGA Amiga too. Following the current trend, it's been snapped up from the flourishing European Amiga development scene by Vulcan for their Megabites range of CD only games. Adelco Entertainment (Spain) are the team behind the game, and from the outset you can see the effort they've put into it.

## Post-nuclear landscape

After a couple of need animated logos, a static picture of what looks like rock chick "Postal" babes are followed by a narrated introduction to the post-nuclear play world where the game is set. If you select English as the language then it is an impressive first off. It's choose from you actually get the spoken introduction spool'd off the CD. It's a bit cheesy and predictable, but let's not

get carried away. Come into the game in one of the five fatalities (stabbed or by the face).

Look, a givewick, sorry I meant a gift house, in the mouth.

Moving swiftly on with a bit of the exposition, an impressive animation of statuary references acts as a bridge to introduce the plot of the game, in which a eye is chased through some streets and a tunnel, before the closing caption "Once again, the hand of the Mafia emerges from the hands of Justice". The animation is quite lengthy and as it's displayed almost from the CD, you'll need a 48 CD drive to read it at full speed - played on a standard 32000 it becomes more like seconds.

Still with me? Good. To re-cap the basic plot, there's this Mafia boss who needs some cash, and you're the man for the job. You and who's army? You might well ask. Actually, you and 'your' army, if you've got enough friends to draw upon. While on the

# AGA



surface, this looks like a substandard *Penitentiary* clone (well, come to think of it, it does actually have some nice levels, just hasn't the option to have up to eight human players taking part at once). Vulcan can supply you with a multi-user joystick adapter, or you can squeeze in on the keyboard. That's not to say you can't play it alone though.

There are actually four main gameplay modes to choose from: Action, Deathmatch, Gang War and Practice. Action mode is your basic 'beat up' the gang to move onto the next level' type of thing. Deathmatch allows you to select any of its 20 characters and then slug it out in a free for all with no computer controlled enemies.

Gang War is like the Deathmatch, but you can team up with other human players to form big gangs of three, three of two or whatever you like.



## The usual suspects

There's an impressive number of characters to choose from (not that it seems to make much difference who you control). In the interests of visual equality, there's the usual upstaging of female figures too. Have you noticed how they all have a quirky resemblance to those *Velvetta* chaps?





## Two-dimensional

Despite the earlier references to the likes of *Metroid* and *Castlevania*, you can pay from the screen that this is not, really, in the same league. While players have commented on its links to  *Streets of Rage*, it can't help adding the stereotypes with that parental gang we last saw in *Renegades*. ▀

*The Strangers* is a series of horizontally scrolling 'stages' in the form of various drift locations around the aforementioned post-industrial city. About two screens in width, they scroll with the players as they move one way then the other. Although you can walk up and down the screen as well as side to side, it's well and truly two-dimensional. That's to be expected of course, and no bad thing in itself. The trouble is, it's not just the graphics that are flat – the gameplay is too.

Before long the process of beating up your opponents becomes all too mundane. For a start, none of the moves are particu-

lly exciting with your basic punches, kicks and the odd wrestling move. If the level does, however, gives you a place to stand, then put you out of your misery with one of the 'finalities' by shooting your arm off, then your head. If you don't want this level of gore, there's a 'parent look' option, used to enable or disable the fatalities. There's also weapons to pick up, but these offer little distinction from the punching monotony. Things improve as more human players join in the fun, but still the shallow action does little to get the blood boiling.

Strip away the fancy splashed intro screens and sequences, and you're left with a game that's desperately trying to improve on its simplistic origins. The huge variety of characters, gameplay variations and options do make a difference, in fact they will be enough to save the game in the eyes of some, but let's be frank. The gameplay really is like pantomime from a mid-80s tape cassette. That could be acceptable in some games but beat 'em up have come a long way since then.

It's clear that big efforts have been made, but at the end of the day they fall in vain. If that same amount of effort had been put into developing the core gameplay, I'm sure things would have been different. Bigger sprites, faster action, more intelligent enemies, tougher sound and professional looking graphics should have been at the top of the list. This is a shame, as the Amiga has never been well catered for when it comes to beat 'em ups. Anyone working on similar projects would do well to take a look at the classic 16- and the Amiga conversion of  *Metal Gear*. In  *Streets of Rage*, graphics, sound and balanced gameplay can be combined to good effect. ▀

Steve Morgan



## Introducing... a car chase

Whatever you think of the game graphics, the rendered 3D car chase looks as impressive as pretty impressive. While it starts looking like a couple of toy cars running around a cardboard set, it soon gets there, culminating with some dynamic camera motion-blurred camera panning. It all ends in the satisfyingly predictable crash. What a shame it's got nothing to do with the game itself.



## THE STRANGERS AGA

• Platform series	24	• Games	10
• Castle of Drak	20	• Games	10
• 3D	200 Day	• Games	10
• Amiga	Amiga	• Games	10

### RESULTS

Let all hairy dressing around a hairy head... zap up.

60%

# Tips Central

GU Amiga's wacky arcade opus is just about ripe for some tips from Mark Forbes... whilst over on the other page the dungeon master Tony Gill does some more of his expert adventure solving for us.

## Dune 2

Miss 1 Death from Hell has a way to rip off the Dune 2 bolts. Find, destroy the enemy communication yard or vents so they can't rebuild again while you have found them, and once you've practically destroyed everything leave either a space mine site or a nuclear output standing. If there's a lot of space left you can collect the whole lot. All those credits will be yours and you gain a better score and rank, try it... it always works for me.

## Xtreme Racing

On the first selection screen, type the following:  
**AMAZON AMAZON** - use a shotgun to race with!  
**ROBOTS ROBOTS ROBOTS** - mega fast car!  
**AMAZA** - auto qualify for any race and access the 3 bonus tracks in single race mode.  
**Hints for 8 bonus tracks:**  
**Amazonas 1** - Go to the left of the two traffic islands, and go straight on (pick up the turbo boost) until you can see a gap in the wall

with a trap in it. Drive through the tree and reverse onto the course on the other side. Cross short out, useful too.

**Desertlands 1** - There is a road through the middle of the second island (the one before the main Start/Finish grid). As you have to go through a tree again!  
**Brand Clarence 2** - At approximately two thirds of the way along the very first long

straight, you can actually drive through the tree wall and then on the second long straight!



## Theme Park

Malcolm Campbell came across a supreme tip for those who don't like cheating (sorry, I've never heard of such a thing!). When you come across the situation of having very little money (even pounds farrichter), but you also have a fairly large park then try doing the following:

1. Close the park.
2. Cut off all pathways to the rides.
3. Take out a loan, if it is necessary.

4. Place shops around the entrance and put up the prices.
5. Open the park and wait.

Now people will flood in very happily, and will buy everything they can get their hands on. Meanwhile you can be preparing the rest of the park for reopening.

You can easily get half a million in a couple of weeks from the gate takings, shop takings and the end of year bonus as a result of all those happy little people.



## Colonisation

It's all gone strategy crazy with this month's tip! Colonisation is on of my favourite strategy games of all time, so I was pleased to get hold of the custom sheet which virtually gives you a licence to print cash! Here's what to do...

When starting a new colony name it "Charlottesville" (well doesn't everyone call their colony by girl's names?). This allows you to see all the maps instantly, see other European ports, check on other countries stations, and it also gives you \$50,000.

When you access the other colonies' European ports you can spend all their money! You can do this by either recruiting lots of people, or you can buy anything! Or if you start again and rename your colony to something else you can start another colony called "Charlottesville" and get yourself another \$50,000.

For example, if you start a colony and get \$50,000 and then abandon the game several times, you will eventually start the game with \$800,000.

## Sim City 2000

Start a new game, at any point in the建模 level, type F1U0 until your cash reaches \$80,000 (and reply yes to all queries). Now you go to the budget menu and select bond payments. Click on reply bond and answer yes to reply bond at 2%. You will now receive \$80,000 every year!

Try doing in the following sequence codes for some amusing effects: **Z000A**, **V000A**, **C000A**, **F000A**, **D000A**.

## You need help

If you would like some help on any game - or you have some tips that you'd like to share with your fellow readers - then please write to us at Tips Central at the following address, remembering to mark your envelope 'Advertisement' or 'Answer service only'.

**Tips Central**  
**GU Amiga Magazine**,  
**37-39 Millbank, Isle of Dogs**,  
**London E14 9T2**

## Adventure helpline

### Police Quest II

I have been playing Police Quest III for ages. I am completely stuck as I don't know how to get into my locker or my Captain's locker, how and where to get my gun, how to gain access to the computer and what the passwords on the Captain's desk mean. Please give me some help as this is my favourite Sierra game.

Wendy

I love it when people tell me about their favourite games, and then reveal that they haven't got a clue about it and have been stuck on screen for 10 years. You must have some pretty rotten other games.

The passwords are used for the computer of course, and this is what you do. With the computer, use computer, here on computer. Access (password file is password). Look at Lloyd Pratt and Robert's files and note the information about their problems. Access the Homefile file (password is increment). Access the file (the password is Blahno).

You'll find the combination for your locker written on the back of a business card which is in the glove compartment of your car. The combination is 38-4-12. If you want a laugh, try moving the plan inside your locker.

### Simon the Sorcerer

I am well and truly stuck on Simon the Sorcerer. I have managed to get past the puzzle outside the Tower of Doom, but what continues to really puzzle me is how will I get past the fog on the other side of the pond.

I have tried using the stone against him, but he keeps on grab-



**Flight of the Beastie Beast**

bing me and then spitting me out.

Craig Lumsden, Alnwick

Ready things frogs. I had some frog legs for lunch last week, and they were so fresh they kept licking the pens off my plate.

If you look in the water at the edge of the pond you can find a tadpole. I know it's there, so look very carefully, as it is easy to miss it. Once you have the tadpole you should talk to the frog and tell him 'boopit' or else the tadpole will get it!

### Flight of the Amazon Queen

I need to know how to get past the snake in the Snake Room. I have the money's hand and the wrappings, but when I try to put them together the game keeps saying 'It's off'. I need to know how to turn it on.

Lee Fox, Reading

The idea of putting the wrappings and the arm bands together is to form a torch which we can

then light and scare the snake away. Obviously, until you light the torch it will be off.

The trick is how to turn it on. For this you'll need to light the lighter using the fire, then use the lighter to light the torch. If you haven't got a fire, and it's not the sort of thing that most people carry around with them these days, then go back to the huge statue and walk into its mouth. Go, via the pulley room, to the room of the map. Use the pick ax to open a hole on the right, then use it again to break the staircase at the right. It is here that you'll find the fire.

### KGB

I have climbed onboard the Victor Mamonov boat and tried to find anything that I can pick up. But there's nothing. I have also hidden in various places, but get caught every time. Can you please help before I go completely mad.

Super-Simon, Bradford

You say there is nothing to pick up. Maybe you are just too clumsy. I know that when I've been out on a Saturday night and decided that there really isn't anything worth picking up, a few pieces of litter usually does the trick. I suggest you hide behind the bath



**Monkey Island 2**

stakes and wait until the moonlight turns up and then leaves. Now you'll be able to climb down into the Radio Room. Here you will then be able to add all of the items to your inventory which is under the bed. Back on deck you must throw the bottle overboard (out left of the Wheelhouse). The mechanic will come in after it, allowing you to get down into the engine compartment and hide in the closet.

Eventually the mechanic will return and fall fast asleep. Use the bolt with the engine, then go back into hiding until 8.00. At this point head for the fire and wait behind the fire engine until midnight. Follow anyone who appears and goes to the Radio Shack, so that you can listen at the door of the Reception Room. Return to your hiding place and stay until 8.00. When everyone has left you can walk to the shore at 8.00. At 8.00 you'll need port.

### The Secret of Monkey Island

I have been playing this game for years, and I don't want to give up on it, but I really need some help. I have reached Monkey Island, but I haven't a clue what to do or where to go. Can you help?

Edie Harris, Northall

When you arrive on the island you'll be nicely placed to pick up a banana. Walk to the fort on the NW of the island and pick up the rope and the apples. Push the canon and pick up the canon ball and gunpowder. Go to the river bank (east of island) and pick up the rock (which is really a fist). Now use the gunpowder on the stone and use the fist on the canon ball.

Now you've lit the dry river bed and piled with rocks. Then go to the place where there's a canopy you wouldn't reach before. Pick up a piece of rope. With two pieces of rope you can go to the rock over the landing beach and use them to climb to the top to find a set of ears. Walk to the piece of primitive art and pull it down to move it. Climb to the cliff above and push a rock off the ledge. And now you'll be able to collect the bunch of bananas which you badly need.



**Simon the Sorcerer**





Ho hum, another month another collection of new products to pump through the CU Amiga labs. If only the Amiga market would settle down, we'd get some peace.

## 50 Fusion Mac Emulator

Jim Brown's latest commercial Macintosh emulator gets a thorough examination by Matt Bernstein. Is Fusion a Sheepkiller? [\[more\]](#)

## 52 EyeTech E-Z Tower

Andrew Karr checks out EyeTech's new E-Z Tower kit. A table of E-Z Tower systems is provided for easy comparison. [\[more\]](#)

## 54 Storm C v2.0

The latest version of the Storm C compiler gets a workout from CU Amiga code guru, Jason Palance. [\[more\]](#)

## 58 Apollo 1280/66

The fastest Amiga 1200 add-on card on the planet examined. We also look at unboxing the latest batch of 12000 CPUs. [\[more\]](#)

## 59 p.OS Pre-release

Robotic's AmigaOS clone operating system is shaping up nicely. Does Andrew Karr think this is worthy successor to AmigaOS? [\[more\]](#)

## 61 Internet News Readers

Newsster 1.0 and iNews 2.0 are compared head-to-head to see which Usenet news reader comes up tops. [\[more\]](#)

## 62 Modems

The latest and greatest Supra 1685 modems and the Zonet DirectNet 1200 serial adapter find themselves under Matt Bernstein's gaze. [\[more\]](#)

## 64 PD Scene

Big PD entertainment, this month's authors of Charity Call, the stunning Captured Dreams theme, and a rather familiar looking wood flight sim... [\[more\]](#)

## 66 PD Utilities

Graphics and directory tools are the big thing this month, but for more variety there's also our regular Best of the Amiga section. [\[more\]](#)

## 70 CD-ROM Scene

Another juicy selection of CD-ROMs including a rather superior Italian CD, a disc for the Amiga's Park Office and the latest Amiga set. [\[more\]](#)

## 72 Art Gallery

Now computer art from our talented readers worldwide. From photo-realism to moody hand-drawn work, it's all here. [\[more\]](#)



# Fusion

■ \$49.95 ■ Developer: Microcode Solutions ■ Supplier: Bitversah © 1998 261466 <http://www.bitversah.com>

**Fusion is the latest commercial Macintosh emulator from Jim Drew's Microcode Solutions stable. Mat Bottinson asks if it shapes up against ShapeShifter.**

**M**acintosh emulation has always been a complex and difficult endeavour. However, when you need to run some of the big industry standard applications, Mac emulation is just the shot. Actual Macintosh-like performance is nearly possible unlike PC emulation which is hard to beat. If you're a serious Amiga user, it's also good for playing some of the big name games on the Mac that may never make it to the Amiga.

### Fusion vs. ShapeShifter

Whatever the reason for emulating a Macintosh, Christian Gauer's ShapeShifter is the Amiga's de facto standard Macintosh emulator. ShapeShifter hasn't been developed a great deal in recent times and there remains a number of features and improvements that can be made. Fusion claims to be just this, a ShapeShifter better.

The big improvements include virtual memory support, direct display drivers and all round performance gains. Fusion is a 100% commercial package so you won't

have the ability to try it but unlike ShapeShifter's shareware policy. Supplied on a single floppy disk, the installer copies everything needed to the hard drive and installs the 'reboot' command to the start-up sequence. This was the crux of my problem, however I saved my Amiga's 81200 tower with a Silicon 1000 to speed it into a constant read loop.

I booted it up, started the Amiga sequence and it stalled to read the documentation provided in Amiga Guide form only. It was quickly apparent that there was no documentation on rawware or the other file provided called rawload. Name of the patch is always required with Macintosh emulation to fix the startup area of memory. The file, PrepareIt! worked fine for SS but Fusion refused to acknowledge the patch. Through certain degrees of experimentation I found that rawload needed to be in the startup sequence instead.

Fusion's GUI sets up all aspects of the emulation and there's quite a bit of it too. The first page lets you select the memory used for the emulation. Every type of memory



A fine focus in setting the control panel is critical.



Here's the CPU settings which allows us to mess any bus cycles on the Amiga.

is listed (verbosely), impressive but the free and used memory pages often load the bus and have up and down with a couple of mouse clicks. On the same page is the memory options and here one can activate the really memory function of Fusion, the Intel options, to allow Virtual memory on the Mac side. Of course one will need a CPU with an Intel to take advantage of this aspect. An 80000 or 88000 will do.

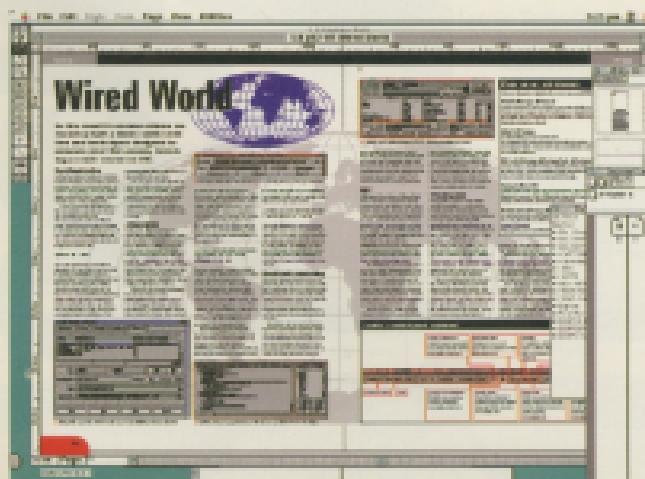
### Video drivers

On the video page Fusion displays a list of drivers, clicking on one brings it to the selected window, clicking on it on the selected side activates the options. Fusion uses the Amiga GUI method on a few pages but it's possible to get through. I'd be happier with a more standard GUI approach though and some online help.

The display drivers are excellent, there's native Amiga drivers, Cyber-Dock2, AT320, Grafis and PowerGraf, all with refresh mode drivers and direct to the display drivers called DL. The latter is very welcome as the others great speed boost over ShapeShifter. The implementation of QuickDraw acceleration translation through the RTC system also adds display speed greatly.

Unlike ShapeShifter which sets the screenmode to start the emulation in, Fusion actually takes the display mode available from the display driver in question and adds this to the Mac side. The Macintosh standard monitor control panel will then allow changing of screenmodes in the Mac rather than a reboot. Another powerful and welcome feature. By plugging in a high density floppy disk, I managed to start Fusion the official way. This was done by defining a hard drive (more later) and booting the real Mac OS System 7.5 floppy. First the DiskTools floppy is format my hard. Me, the 7.5 installer for a painstakingly slow process of installing System 7.5. After the entire installation procedure had finished, it booted up with the generic Macintosh

■ **More to look at**  
System, control  
ShapeSS  
Amiga, reading  
as Fusion.



Intel Undescriptive Error<sup>1</sup>. After several more attempts choosing progressively less trivial, it never worked and I gave up.

The obvious question about Fusion is: "How can I use ShapeShifter partitions and hard files with Fusion?" The answer is: "You can't" but you wouldn't know it from the documentation which fails to mention it in fact, not ungraciously fails to mention using ShapeShifter partitions at all. After a call to Microsoft, it transpires that there is a roundabout way of doing this. For a raw file, one that creates a Fusion hard file of the same size as the ShapeShifter hard file, then takes the Fusion hard file and renames your ShapeShifter to that of Fusion's.

Why in earth can't you just select an existing hard file? The authors claim is that it's better to start from scratch, but after a lifetime of experimenting, it's clear that Fusion is much more fussy when it comes to reading MacOS.

## Mounting SS partitions

Using a ShapeShifter partition is possible in a relatively less painful way.

The original AmigaOS partition entry for the partition needs to be mounted and then Fusion can access it from its devices page - the same process for creating a new Fusion Mac partition. It would appear that the partition must remain mounted until 10.5 where it is typical to dismount the partition from the hard drive's 10.5 settings.

Fusion has standard support for ports, the Mac Port A and Port B can be pointed to internal or parallel devices. A quick test verified that this worked fine. Unfortunately the requires drive didn't hang up at all. After adding the slave device (SAMBA drives, the Intel failed to recognise the presence of Ethernet at all and disabled the Ethernet networking. This was a major blow for use of Fusion in the office, Microsoft and the author had no suggestion on why it should not work.

With image files, Fusion recommends standard VHD ROMs even if using an ISO. Apparently Jon Drew has performed some miracles of patching the ROMs to work on ISO and CDs, which works better than Apple's own patched VHD ROMs. Like ShapeShifter it's ability is predestined to dump the ROM image off a real Macintosh, I used the same 16bit Quastra 800 ROM image used for ShapeShifter with no problems.

Fusion has support for the ATI audio mixing system which means that real 16-bit audio can be output from the Mac side directly to any supported ATI sound card or even the Amiga's native sound via an ATI icon driver. This is excellent and future proof audio support.

## SCSI strange approach

Unlike ShapeShifter, Fusion does strange things with supporting CD-ROMs and standard SCSI. It will allow a CD-ROM to be selected by device name and will number but for proper native Mac OS support to devices, one must use the SCSIPort used with the SCSI interface or create an AmigaOS mountpoint for a device. Microsoft informed us that proper Amiga SCSI support is coming in Fusion 1.2. I certainly couldn't get a Zip drive up and running but it took seconds with ShapeShifter.

Fusion has support input handling for the mouse and keyboard. There's a choice of using low level hardware mouse handling or software handling which emulates the use of non standard controlling devices such as graphics tablets and audit trails. There's also basic support for the iS keyboard and the international 102-key keyboard.

There's the ability to set the Mac being emulated via a cycle gadget. This doesn't mean anything other than setting an ID for MacOS so some programs will depend on it from other experience of ShapeShifter's Mac OS 8.1 emulation. In all, the Fusion team



▲ The list of issues Mac emulation rarely beats Mac OS X's performance scores and rated memory.

and SCSI is functional but a little sluggish. Fusion can also be launched from the command line. Interestingly whenever Fusion is run, it says "Type Fusion -h for usage instructions" but the -h (or help) mode does nothing. It's a great shame that the front end and GUI doesn't have help buttons which pull up the AmigaGuide to the relevant locations or any button (or using the AmigaGuide documentation at all).

One cool Fusion feature is that when thinking back to Werkbench, there's a relevant theme that controls the Fusion session. The greatest function here must surely be the ISO browser. This allows any volume on the Mac side to be mounted on the Amiga. It's something like the Mac handler on ShapeShifter but it is GUI and without having to mess with bootpaps and mounting orders to select a drive. It's a massive improvement on the ShapeShifter method. Fusion also allows independent movement of files from Amiga to Mac and vice versa.

## Mac OS X compatibility



▲ The main Fusion control GUI. See how it's the same with the older Amiga panel.

## Emulation control panel

It's possible to force kill the emulation with a button on this little emulation control panel but doing so is a bad plan. In fact I found shutting down the emulation at all was ill advised unless you need to reboot. Otherwise a variety of bad behaviour happens. Fusion task fields, crashes and so on resulted. The author's Mac OS using of a ShapeShifter handles but this behaviour was evident even on a fresh Fusion handle.

Concluding, I found Fusion a very difficult product to review. Macintosh emulation can be relatively easy on one aspect and then not at all on another. This doesn't explain the collection of difficulties experienced here.

Most of my problems really could have been addressed with much improved documentation not to mention native help for the GUI. The lack of network support, functioning and crashes on quitting are just plain bugs that need to be fixed. Luckily it seems that some of these aspects are going to be addressed in version 1.2 including the essential Amiga SCSI support.

While Fusion is certainly more developed than ShapeShifter with impressive features and performance gains, it still remains an unfinished product. If these criticisms were addressed there's nothing holding Fusion back from sweeping up the Mac emulation throne. I recommend Fusion if you're willing to wade through the hassles and consider if Mac gaming is in your mind. The raw video performance makes 3D games such as Duke Nukem 3D far more impressive. However, for the Mac emulation newbie, I can't give it the roundabout thumbs up. First try using ShapeShifter before parting your wallet out, it's much easier to get up and running. Fusion is a good step forwards but it needs some more polish yet. ■

**Mark Bertinsson**

## FUSION Developer: Microsoft Services

**System Requirements:** Intel Mac memory and processor Mac OS X 10.2 or later Mac OS X 10.3 or later Mac OS X 10.4 or later

**Size of file:** 100% Mac documentation and Mac native code

**Performance:** 100% AmigaOS 3.1 or currently best performance

**Notes for review:** 100% Mac OS X 10.2 or later Mac OS X 10.3 or later Mac OS X 10.4 or later

**Review:**  
Fast, powerful but limited Mac emulation.

**78**

# Mk II EZ-Tower

■ Price: £119.95 ■ Supplier: Eyetech Group Ltd

■ 01642 713 185 <http://www.eyetech.co.uk/~eyetech>

**Eyetech hits the scene with an offering which makes the word "tower" more verb than noun... this beast is vast. What's more, you barely need to take your Amiga apart.**

**T**he EZ-Tower is a rather interesting alternative to the KCS and Mikronik towers reviewed last month. It is designed with the home build market very much in mind, and is aimed squarely at the kind of people who are much more at home with a hacksaw and hand drill than they are with a soldering iron.

The biggest difference between this tower and the ones we've looked at previously is that the motherboard doesn't come out of the case. You remove the top of your A1200 and the keyboard, lift the mainboard, metal shield, and the bottom of the plastic case all at once together. There is a long slot in the back of the tower into which the A1200 fits, after a couple of small loosening/screwing notches are cut into it, and a small metal retaining plate is screwed over the top to hold the A1200 in place. The computer remains housed at the front, but a cover plate that mounts the front of the case lets you fiddle it with cable ties.

An interesting departure from the norm sees the motherboard being mounted the opposite way around than most towers, where

thing only possible because of the unique nature of the particular tower case.

This is advantageous to PC/Amiga users as it means they don't have to buy an expensive and fragile angle converter. What's more the tower has a cut-out at the back designed to take a case which converts the inconvenient 50 way Centronics interface on a Sounder to a more common 28 pin D-type connector plate for the back, and a 50 way IDC connector for internal SCSI drives. If you have an external SCSI CD-ROM drive, you can move the drive mechanism into your tower, and you should find a cable of this type in the old external case. Alternatively Eyetech can supply them for just under £20. The down-side of the unusual alignment is that

PCIe accelerator cards are left dangling by the side. The manual does suggest that you might want to wedge your accelerator in place. We strongly urge anyone to follow this advice. The second downside is that the motherboard keeps inside the case, making further modifications a bit of a pain. If you want to fiddle about the insides once you've constructed it, this is no problem, but if you are a klunker it will interfere.

## A lot of thought

A similar amount of thought has gone into the design of the rest of the review. A very nice touch is the CD/DVD phone output option. Rather than just sticking a couple of phone jacks on the back and letting people deal with having two sound outputs for themselves, Eyetech supply a simple passive mixer stage to mix the CD audio and Amiga audio outputs.

Eyetech supply the IDE-Ken keyboard adapter, the easiest way to install and about par for the course for reliability. Alternatives are the Adac interface and the Mikronik adapter. You're likely to want an extension to the IDE interface too. Eyetech sell an expensive good buffered device which gives you two channels, allowing up to four IDE devices to be connected.

The solution to the floppy mounting problem that Eyetech offer is the Q2-DIF, an interface which allows standard PC drives to be connected as a standard DD



DD. They are currently listing this at £149, including the drive, which seems like an expensive way to go. We feel that with both the KCS and Mikronik towers allowing you to retain your old floppies, this is a point against. However, Eyetech have assured us that they

## Zero Solutions?

The Mikronik (reviewed which are located at <http://www.eyetech.co.uk/~eyetech>) in last month's review of the Mikronik and KCS towers cannot be used in the Eyetech tower - this 'upside-down' mounting makes this impossible. Instead Eyetech use the RIM board as used in the Logic tower system. Eyetech did not supply the RIM board with one, so we have not had a chance to try one out. In operation there should be little difference between them, and Eyetech tell us that the old reliability problems the RIM board suffered in the past have been solved.

will be supplying a face plate and cable for connecting your internal drive as standard by the time you are reading this.

A clever touch is the connection of the LEDs to the I/O30 header on the motherboard. A small row of header pins is connected alongside it to provide earth lines for the LEDs, the current controlling resistance supplied via an inline resistor module which ties the header pins to earth. The LED header plug sits straight on top of this. It is a pity that there is not a solution for the reset line, however. The Microtek tower relies on the reset line on the Zorro board, and the ZD uses the Amiga keyboard interface which has a built in reset line.

Assembly is designed to be easy. Oddly enough one doesn't find the tower to be any easier than the others to build, although the difficulties are in different areas. This is certainly the way to go if the notion of scrapping your Amiga 1200 or the bare board makes you break out into a sweat. Assembling this will feels more like commanding an flea captured than embarking on some serious electronics. In its final form it runs very nicely, makes more noise than you are ever likely to notice.

### Multiple choice Zorro

With the Microtek board being joined by a bigger brother, there are now three options to look at in the busboard stakes.

The Microtek ZD1 is the one we looked at in month, and fits in both the Microtek and ZD towers. It comes with five Zorro 2 slots, two ISA slots, two PCI slots (not used with the Microtek PC motherboard only) and has a 386 slot option. The ZD1 is the same but with the addition of a SCSI-2 interface and an Am386 CPU also which allows the board to accept any of the low A4000 accelerator cards such as the Cyberstorm 386.

The Zorro 2 slots have also been opened up to the Zorro 3 standard. The board is £1095, for which this tower has been designed to house Zorro 2 slots and five drives. Microtek's £1495 3604771 supply the Microtek units at £1495.00 for the ZD1 and £1595.00 for the ZD4. Eyteltech sell the PBM unit for their own towers at £1595.00. An interesting development for the near future is the single and Zorro card faceplate, which should work in any tower. Produced in response to the clear demand for graphics cards above all else, Eyteltech are hoping to be able to sell the card at under £100, or for £50 including a graphics card.

### Contact Addresses

Microtek tower, 8000 based on:  
Eyteltech Group +44 (0)800 712110

### PCI tower

Intech Computers +44 (0)843 316224

Microtek tower, Microtek, based on:  
Microtek +44 (0)800 287000

### The ultimate tower comparison chart

	Symbolic	Microtek definition	ICD Amiga
<b>Base of construction</b>	B10	8110	8110
<b>Dimensions</b>	3/10	8110	8110
<b>Rebayard interface</b>	3/10	8110	3/10
<b>Floppy drive solution</b>	B10	8110	3/10
<b>Accessibility</b>	B10	8110	8110
<b>Drive bay</b>	1	8110	3/10
<b>Internal space</b>	10/10	8110	8110
<b>CDROM slot</b>	+	+	+
<b>Base Motherboards</b>	+	+	+
<b>Base switch connector</b>	+	+	+
<b>PCI/ISA access</b>	+	8000	8000
<b>Number of buyer boards</b>	2	2	2
<b>23"</b>	+	+	+
<b>5.25"</b>	+	+	+
<b>Board-type</b>	PBM	Microtek	Microtek
<b>Casey Base tower &amp; PSU</b>	£1195.00	£1195.00	£1195.00
<b>Power no PSU, 8000 base</b>	+	£1195.00	+
<b>Power, PSU, 8000 base</b>	+	+	+
<b>8 buyer boards</b>	£1595.00	£1595.00	£1595.00
<b>Baseboard cases: Microtek (£1495.00 or £1595.00), PBM (£1195.00)</b>			
<b>1) Optional extras. 2) Optional extra, includes Amiga audio and video.</b>			
<b>3) Only with custom Pentium board. 4) Only with Pentium fitted. 5) Drive bays £11.95. 6) Drive bays £29.95. 7) ICD do not supply the baseboard, purchasers will have to buy their own from Microtek or their local Microtek supplier. 8) Or £1195.00 with free keyboard, CDROM slot, and full assembly.</b>			

An intriguing aspect of the design is that the back-to-front insertion of the motherboard means that a standard PC AT motherboard can be inserted into the case in the normal way at the same time as the Amiga. The card slots on the PC motherboard will carry the Amiga space for Zorro, but there should still be room.



As we use the single Zorro, As a more exciting alternative, we found there was plenty of space to stick a PC/104 Ethernet adapter into the A1200 and ethernet the two machines together for the ultimate Amiga set up. Putting the Amiga to the PC eliminates much of the need for Zorro cards anyway - see page 52 of last month's issue for an idea of what this could do.

Overall the Eyteltech tower offers clean looks, with a velcro result especially. The final tower is nice to look at, if a little稚气 internally. It's a bit of a mess, more of an under-the-dustbin than read-the-instruction tower. It has a lot going for it, but there are savings and installations. It's certainly the easiest construction option for the less-experienced builder, but won't be going to tell anyone not to buy. We like it, and if you look at the big table you can see exactly how it compares to its main competitors.

Andrew Ross

### MX II EX-TOWER

Developer: Eyteltech Group

#### System Requirements

An Amiga and a few simple tools.

#### Base of use

This is MX II as the base case. Amiga 1200 or the power and boards at the time of release.

#### Performance

Loads of bays, decent build quality and plenty of access. However we haven't tried the base option yet because

#### Value for money

Loads of room for the Amiga, plenty of adaptors and good technical support from Eyteltech.

#### Overall

A very nice piece of kit, particularly for the cost on tower.

**89%**

# StormC v2.0

■ Price: £229.95 (commercial license) £110.95 (non-commercial license)

■ Developer: Haage & Partner ■ Supplier: Bittersoft © 01908 261461

Looks like Haage and Partner will succeed in propelling the Amiga's development tools into the present day... with just a little help.



not those who are only remotely interested in programming that have heard about this new kid on the block. StormC seemed to appear from nowhere and, from the very beginning, it has set about stealing BASIC's crown. Now it's reached version 2.0 and the jury has been reassembled to see whether it's got what it takes.

## Project Manager

StormC is a C and C++ compiler, but it's not like your average Amiga C compiler. No, it's got this Project Manager thing you see and this, above all, is its unique selling point.

Recently, the Amiga has been left behind in its development tools. For instance, the Mac was blessed with Metrowerks' wonderful CodeWarrior IDE for a while. So it's time someone lured the Amiga into the nineties and borrowed the decent ideas from other platforms. This is exactly what StormC has done. In fact, the Project Manager is similar to that found in CodeWarrior (especially the way project sections are represented).

This Project Manager takes the hassle out of creating Makefiles, writing out dependencies between files, and invoking the compiler and linker with the correct options. It's all done visually (by drag and drop, mind). All options and other customisations can be set via a nice GUI. No more messing with command line tools and remembering a million different switches (although it doesn't prevent you doing this, if you're masochistic).

Everything is really simple and easy which makes it ideal for beginners, but there's still the complexity of writing some code (you'll have to cope with that by yourself). Even seasoned programmers will find this aspect a real boon. Imagine the development time

that can be saved. Old hands can also work their own magic using the Project Manager thanks to the new Allegro Makefiles (one of the supplied examples shows how to integrate compiling example files).

## Text Editor

StormC is a complete IDE (integrated development environment). The most important component is the program you use to create your source: The Text Editor. StormC's own editor is great. It's got syntax highlighting, is easy to use and is even integrated with the source level debugger.

Even better news is that now StormC has the option of using Distinct Client's Build 4.0 (binary version included). There's no sacrifice. It's been integrated in the same way as StormC's standard editor. It's a clever idea since it充分利用es the same resources to concentrate on developing the compiler. Plus, it removes one complaint against the package (the standard editor is not very customisable, as it might not suit some people).

Next on the modern features list is the protected environment that you can use to run programs. This tracks any resources (such as memory and windows) that your program obtains and makes sure they are freed while it terminates (and lets you know anything that went AWOL in this way).

Mostly, running buggy programs that don't free resources requires rebooting frequently or that you risk your Amiga crashing when memory or some resource is low. So, this feature is another one that speaks up development times and helps to track bugs.

This is one of several useful Amiga specific features and others include automated opening (and closing) of standard libraries and online help in the form of the official



■ Amiga Autodoc (plus a manual on the AmiC functions in German).

## The Guts

So, underneath all this is there is decent compiler! Well yes, but it's resented yes. The quality and efficiency doesn't seem to match MSVC, but the friendliness and simplicity it brings will largely overshadow these concerns for most users. It's also very strict on what it will allow as properly formed C code (which proves it's an ANSI C compliant).

The StormC "issues" is apparently "The program is in the test phase" is equal to the final product (sic!). In practice it means the compiler can use the same options and generate the same code even if you're using the debugger or profiler. These options are obvious, from others have you fallen foul of a weird bug that isn't reproducible in the debugger?

StormC also has support for compiling to the PowerPC and for development of p20 applications, which is great news, even at this early stage. This shows the commitment that Haage and Partner have, and it's a real indicator that StormC is being actively developed. How many other commercial C compilers can you say that for?

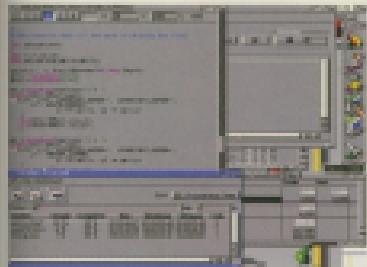
## Choices

One complaint levelled against the package is that its German mode are very violent. The manual is not the best translation in the world (see the StormC review above), and it sometimes makes funny reading.

But recently it just means it takes a bit more effort to understand the point they're trying to get across. It's also not as complete or up-to-date as it could be, and the IDE is trying out for some online help with setting various compiler options. A couple of good highlights are the help for parsing BASIC sources (the compiler is already compatible

■ StormC has the debugger and the great website explorer.





and the separate summary and detailed descriptions of the completed matches.

These minor grumbles are probably more serious to beginners, which is a shame, since it's the one fly in the ointment in that respect. But it's still the only choice if you're just starting out, and you might as much easier life if you struggle with GCC for free, but you'll drive yourself to an early grave instead the bargain tool, Feed Field. Or you could have done with the very dated BASIC environment, if you can find someone who might sell you a copy – and if you can cope with any problems yourself. Nothing comes close to StormC in terms of ease of use.

For more advanced users, it's still a great choice. Much time is saved using this tool, and that is what good programs should do. Some old BASIC stalwarts may complain that it's missing this feature or that, but nothing really important is omitted. There's room for further development sure, but ultimately it does the job. Of course StormC is a commercial product, and while it would be nice to see some freeware packages learning from the userfriendliness of the project manager and IDE, we mustn't forget it's probably like Haaga and Partner than are showing other companies that the Amiga is still alive.

They have a wonderful product and need our support. The new pricing includes a much cheaper non-commercial license, and I strongly recommend it within the group of the open source, so all-in-all it's a real winner. ■

David Malone

#### STORMC V2.0

Developed: Haaga and Partner Computer

**System Requirements:** 486DX-33, 16MB RAM, 100MB HD (20MB for CD version), 2MB video

Cost of tool	41%
But the project manager is the best solution. No project is too small.	33%
Performance	33%
Very simple and efficient and very optional tools. Not they're only option.	33%
Help for novices	33%
Cost the non-commercial license is a lot of money for those people need support.	33%

#### VERDICT

For anyone other than old BASIC hawks it's the best.

**87%**



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All trademarks recognised





# Apollo 1260/66

■ Price: £399.95 ■ Supplier: Eyetech Group

■ +44(0)1642 713185 <http://www.eyetech.co.uk/~eyetech>

The Amiga world waits to see if PPC, DEC or Alpha will be the processor of the future... meanwhile Apollo have snuck up with the fastest 68k accelerator yet.

**T**he Motorola 68000 is the final chip in the evolutionary 68000 series, the chip that gave birth to the Amiga, the Apple II and the Macintosh. Now that the Macintosh has moved over to PowerPC, the Amiga is the only computer still using the 68000 series as a CPU. These days Motorola point their clients in the direction of the PowerPC. Because of this, the 68000, one of the best 68k CPU designs to come off the production lines, ceased development several years ago, never making it beyond a meagre 10MHz.

## The fastest Amiga ever

The Apollo board runs an 1800 board at 68MHz. As Motorola have never produced a 68000 running at this speed, you might wonder how Apollo have done this.



▲ Amiga 48000 speed test. Works as intended on the Board 1260 (Board = 1).



▲ Amiga 48000 speed test. Works as intended on the Board 1260 (Board = 1).



▲ Amiga 48000 speed test. Works as intended on the Board 1260 (Board = 1).

Overclocking a processor is generally considered to be reuging, but for the life and reliability of a CPU. In this case, there is a subtle difference. Put the heat sink off, and you will see that the chip is marked 68000P0PC00A. That A indicates that this is the latest major revision of the chip, an improvement in the manufacturing techniques which means that while the chip is still rated at 10MHz, it is capable of twice. Apollo have not been as irresponsible as other manufacturers here, implying in overclocking this processor to much. Apparently Motorola consider it to be just about safe at 10MHz. Apollo chose 60 to give a margin of safety.

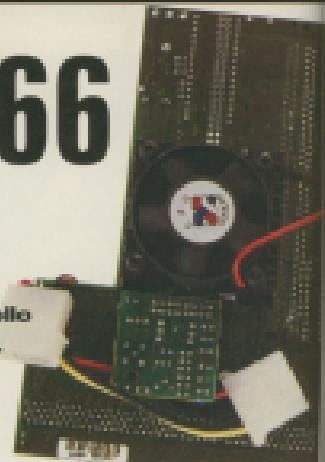
Telling us that this chip could cope at 75MHz like waving a red rag at a bull. We couldn't find a 75MHz crystal, but we tried it with an 80. It passed at our efforts until we had it a 80MHz. We even did some running with an Amiga faster than any before. It was impressive – for all of less time than before it crashed. In contrast, in the weeks that we have had this board running 'off the shelf', it hasn't given any problems.

## The software issue

The development of the 1260 and 1262 saw major advances over the 68000 floating point coprocessor used with the 1200 and 1300. The newer processors are much better at this type of math, essential to certain types of software such as rendering packages.

Unfortunately most software is written assuming 68000 code, some of which is not implemented in the more advanced instruction sets of the later processors. That is why the Board 1260 is supplied with a piece of software called Cyberspatcher which patches calls to the 68000 FPU so that they use the new 1260 functions more efficiently. We last tested on Apollo 1260 board, in October of last year, we couldn't recommend it because it had no similar patches.

This board is distributed with a disc containing the necessary 1260 and 1262 libraries, along with the MCP compatibility, which has a number of patches that drastically improve performance. Our tests showed that if you can live yourself to deal with MCP code, this board does most things at the kind of speeds Cyberspatcher can manage. Also, it



isn't the solution to everything. The Phase test on A1260, a good real world model, still showed the Apollo board suffering badly. Just as we were getting worried, we heard about a new commercial patcher.

## Oxy Saviour

Dispatcher claims to do everything that Cyberspatcher does and more. Feed it to the new 1260 board and suddenly things look a lot better. An Imagine reader sped up from 2 minutes 8 seconds without Cyberspatcher to 2 seconds with. With Cyberspatcher on the board this board is able to be a real challenger. Expect a full review of Dispatcher soon.

The Blizzard 1280/60 sells for £75 less, so this is not amazingly cheap. Check the chip off a friend's board before making your choice. We don't recommend this without Dispatcher, as the things that really need a speed increase are just the things that need patching. Cyberspatcher currently costs £399.95 via email from <http://www.eyetech.co.uk/~eyetech>. Pay the price and get a board a third faster than any other board on the market. If it is speed you are after, this is current King of the Hill. ■

Andrew Ross

## APOLLO 1260/66

Developer: Apollo

### System Requirements:

1260

Processor	1260	1262
Memory	1280/60	1280/62
Graphics	1260	1262
Sound	1260	1262
Hard Drive	1260	1262

**APOLLO**  
If you must have the fastest, you must have this.

# p.OS Pre-release

■ Price: £19.99 ■ Supplier: Schatztruhe/Mad Science 0116 246 3899 ■ Developer: ProDAI

Finally we get to see p.OS. The future of the Amiga or just an interesting dead-end?

**I**n ProDAI have their own way. This CD is going to be the first real glimpse that you will have of the future of the Amiga. p.OS, the parallel operating system, is designed as a direct replacement of AmigaOS. ProDAI have announced that they will offer it as an option on their C640-based systems, supplying this as an AmigaOS environment which will go alongside DOS and Macintosh.

The current release runs on 16-bit integer arithmetic AmigaOS and is really more of a banner than a full OS. Putting out a p.OS preview does tend to give me an extreme mixture of feelings. On the one hand it makes it very clear that ProDAI have put in some seriously good work, whilst on the other it makes it very clear that there is a lot more work that needs to be done. The installation on the CD provides you with a fully functioning p.OS Workbench environment with some brilliant features, but it is heavily reliant on AmigaOS.

The idea is to give you a good idea of what p.OS has to offer, so that when the full version comes out, you will upgrade to that. ProDAI are not going to charge you for this - if you buy the full program, they will refund the difference.

## Boot 'em up

Booting up p.OS reveals a Workbench environment which at first sight reveals nothing much more than you might expect from a copy of simple basic and an icon replacement. As you start to use the environment, you realise that there is a lot more to it. The task layout is particularly similar to MotifWorkbench, which makes it very easy to get used to. There's a few small differences, but similarities are large enough to converge.

## What do you get?

- Configurable taskbar
- Advanced drag and drop
- Task switcher
- Full p.OS shell
- Open file like
- Directory list
- Filenew recognition
- HTML Amiga pages
- Built in image viewer
- Amiga file viewer
- Text & image viewer
- Frontal drawing
- System Color for p.OS
- Animation effects with



realise that this is really an Amiga OS.

The display system that ProDAI employ is quite a departure. Graphics are calculated at 24 bit colour depth and are rendered to whatever screen depth you display at. Amiga Workbench utilises a reasonably clever system of grabbing pens for editors which crop up quite a lot, whereas p.OS seems to differ slightly in the fact it uses a distributed penset, which means that it can look a bit funny when on 256 colour screens. It has colour buffering that I was using had a grey background not used as one of the p.OS pens, so a result it seemed to appear different even in 256 colours, and totally miscoloured in 16.

The advantage of this is that it does display relatively fast - although more costly in acceptable speeds. Use a fine with a reasonably cheap ISA machine, but there is no doubt that this is a system best suited to fast processors and graphics cards. As the OS is intended to eventually run on fast, pentesting super Amigas, this isn't a problem.

## Drag and drop

There isn't enough space here to go in depth into all the features of p.OS, that is more the domain of a feature that I review. There is a lot in this, a couple of noteworthy features are Flipping, which allows the OS to recognise different types of file and load an appropriate display units, and the excellent drag and drop implementation. You can drag and drop transparently into almost anything. You

can drop an icon into a file requester, into a shell, over an appropriate launcher icon etc, and p.OS uses a highlight system so that you know that you are over something that can be transparently dropped into.

There are numerous little touches which make this a very nice working environment, such as being able to 'expand' images on the Workbench so that you can perceive them in a resolution, very fast displays and blissfully easy drag and drop configuration.

## Functionality

The rather worrying aspect of all this is that there are some considerably important areas that need addressing quite badly. A lot of the functions required to make this an entirely stable stand alone OS just do not appear to be there, and rather too much appears to hook into AmigaOS, not a good sign for a quick PPC release. At the moment p.OS appears to be a very sophisticated Workbench replacement in the C640. MotifWorkbench would rather than a fully fledged OS. With more than just a mountain of work to do and also the uncertainty of not knowing which way Cerebus 2000 is going to turn, it's hard to know what the future of p.OS will be.

It has always deserved a little credulity that a small software firm specialising in animation packages could pull off a fully fledged, world leading OS, but having seen this I can't help but think they might do it. ■

**Andrew Karr**



# FFNews 2.0

■ Price: £29.95 ■ Developer: Thorsten Stockmeier ■ Supplier: EyeTech 01642 713185 [www.eyetech.co.uk/~eyetech/](http://eyetech.co.uk/~eyetech/)



**T**he Amiga got off to a slow start with full featured Usenet newsreaders, and though FFNews has already seen a public incarnation released it was hampered with a lack of features and a large bug list.

However, it seems all the interest has spurred Germany's Thorsten Stockmeier into bigger and better things. FFNews 2.0 is a major revamp, no, especially, we saw this preliminary version. FFNews is a MUI application, and exploits this through the use of MUI features. It goes a little too far in the preference with lots of pages, with only a few gadgetizations on each. There are new options in FFNews 2.0, including: built-in line, PDF, HTML viewer, mailing list and standard filters, configurable buttons for the reader window, auto download, pod and SMTP mail support built in and more.

To begin, we need to subscribe to some newsgroups using the Group Manager window. The first time the Group Manager is run, FFNews constructs a massive list of

newsgroups which can take ages. Handling of the 20,000+ list is excellent, with a quick find to search for keywords such as Amiga. It's also possible to subscribe individually and there's an excellent newsgroup switcher where some interesting groups can be dragged to for checking out later.

Choosing a newsgroup activates a new window. Here FFNews 2.0 presents us to a fully threaded reader showing all the posts nicely nested into their hierarchies. There's very handy buttons to fold all the threads for quick access to interesting topics. Clicking on a message fires up the reader window, making three window windows on screen which I think is cumbersome.

MUII attachments are in a frame at the top right, and buttons at the bottom choose such functions as navigating in the news message, replying via Email or a public post etc. Sadly the icons are too large, so there's a large scroll bar to move across them all. You can turn the images off but even the text links are too large. Although luckily you

can drop in small images, so hopefully this will come soon. I wish the C-extensions posting lists had a touch more control for cross-posting but the built-in MUI text editor is adequate enough to make changes return. The scheme isn't all thought out as Mosaic II, but FFNews is still a great newsreader with plenty of future promise. ■

#### Mail Function

#### System Requirements:

Amiga 1200 or 1300 system.

#### VERDICT

The Amiga best newsreader to date.

**90.**

■ FFNews 2.0 is a superb newsreading package. Here you can see all the windows used in browsing and replying.

# NewYork 1.0

■ Price: US\$35 ■ Developer: Finale Development ■ Supplier: GameSoft <http://www.mich.com/~twelling/gamesoft/>

**N**ewYork is a new container to the AmigaUser forum, coming from Finale Development - authors of the classic CUI system and offspring the forthcoming WebCutter browser. New York itself is from classic system Christopher AOL, so we can expect to see a lot of difference from the AOL newsgroups. Choice is good.

The main window has the newsgroups at the top, in a separate partition, but when you click on a newsgroup the top partition turns into a list of messages in that group. I've got two things to say about this. Firstly it's a brilliant idea, there's no point wasting space on the newsgroup list when you're reading a newsgroup. Secondly, unfortunately, the author didn't seem to think that reading was important and it's never completely implemented. Quite frankly it is outrageous.

It's difficult to find the messages and create new ones, as the number of messages can't be folded into their respective

buttons. To make matters worse, you can't even drag the message partition larger. Clearly we're suffering from ClassAct's deficiencies over MUI whatever critics may say.

On the plus side, the Function buttons in the middle of the screen are extremely well done. There's even a pop up MUI bubble help for each. Though it's a weird scroll. Pressing the follow-up button does

exactly what you'd expect it to do, which means reading the previous 100 posts in your preferred size but I couldn't find it, which meant reading the posting window every time. Other nice features include the smart time display for seeing how long we've online, and the hierarchical subgroups manager cutting the list of newsgroups. However that's the only feature in this area, there's not even a find of any kind. Another obvious feature omission.

Some thought has gone into the CUI layout and I commend the author on this often neglected aspect. However the features are

simply missed and it was painful to navigate and to copy newsgroups with a lack of threading and no accessible window.

For features FFNews wins, and New York for idleness - which leaves FFNews 2 in between with its settings on the window menu. My advice is to try all of them in their demo form. You'll find them on the CD in the Magazine directory. It's not just a Mosaic race, it's about what you're comfortable using. My vote goes to FFNews 2 but New York is still a worthwhile effort. ■

#### Mail Function

#### System Requirements:

Amiga 1200 system.

#### VERDICT

A good quality though basic newsgenerator.

**79.**

■ New York has a tidy, nice could say minimalist, single window for most of the operations. Sadly it's not backed up by the features list.



# Supra Express 56

■ Price: £131.15 ■ Developer: Diamond Multimedia ■ Supplier: Active Software 01723 252020

**I** had the new Supra consistently produced high performance modems at a good price with strong support, but having been swallowed into the PC peripheral giant, Diamond Multimedia, it remains to be seen if the mother continues. The SupraExpress 56 is the final MM modem under review, sporting the ISDN line intended, the computer to ISDN 2 standard.

## Faster is better

The new ISDN modems perform some magic relying on the fact that telephone lines are digital and so it's possible to detect the individual samples and use the line to the highest degree possible. It's a lot more complex than this but the upshot of this is that you must have a digital telephone line all the way to your Internet Service Provider to get a 'faster connection'. In the UK, almost everyone does. The SupraExpress 56 is a small, largely featureless, black box. It has no buttons, no telephone pass-through socket and the serial lead is moulded directly into the

back of the unit. There are just two serial ports and I think the older Supra's static box, front panel power, telephone pass-through and that famous Supra funky LED status panel. Oh dear.

You should consider a faster serial port to get the most from these modems. See the reviews of the Holland Whippet and the French Port Plus Jr. Port Plus Jr's Performance is the research and the whole MM modem situation is overhauled. People who achieve real 56K connections are legendary, normally achieving 48K, 49K or if they are very lucky, 49K. The modems are sold as ISDN modems.

The Supra delivered consistent 48,000 connections to Uunet via its fibrefibre lines. I flashed our USR Courier's firmware to X2 and it delivered 44,000. On a BT line, the Supra consistently delivered 48,000 and the Courier 44,000. This modems is more expensive and since the Supra (and Courier) can be flash ROM upgraded to the official standard, when it emerges, choosing X2 or X2plus (paper replacement). Despite performance gain, I don't like the physical attribut-



**A** New fast Supra has swallowed into Diamond Multimedia. The dual interface design is what can be expected. Still, it delivers the goods.

es like the LEDs and lack of pass-through. Thankfully it works fine with STPAs. For a first time modem, or if you want the small speed improvement now, go for it, but make sure it is supported by your service provider. ■ Matt Bellhouse

## System Requirements

Any high speed serial port and digital telephone line required.

## OVERALL

A great solid performing modem.

**84**

# Zyxel Omni.net

■ Price: £225 ■ Developer: Zyxel ■ Supplier: PowerMark 0181 856 7250

**I**SDN is significantly different from normal modems. Because you need a fixed ISDN line installed, no modem is needed to convert data into sound and vice versa as the humble modem. Instead all that's required is an adapter that converts the ISDN2 serial to the ISDN data stream. These are called Terminal Adapters or TAs for short. The Zyxel 'Omni.net' is one such unit, capable of operating at up to 128,000bps if both 16 channels are used (which rarely occurs so much).

The Zyxel is a cream unit with a dark green plastic bezel which the LEDs can be seen through. On the back is a connector for a standard ISDN 2 socket which is typically a box stuck on the wall when a telecoms provider installs the line. There's also a rear mounted serial switch and two sockets for telephones. ISDN provides two lines, one voice and one data (or conversely and hence). Behaviour exactly like a modem, one will have to dig in the manual to set up the TA with the right standards via Hayes-style

commands. This TA supports virtually every ISDN standard from V100 with built-in line compression to MultiPPP with STAC compression. From my tests (we worked with V120 but performance was similar). With MultiPPP performance was amazing with a full 64,000 connect.

Another advantage with ISDN, when dialling, the result is instant. You dialled and log on instantly without any negotiation phase. Using MultiPPP the internal scripting method of logging into an ISP is bypassed and the PPPoCH method, such as provided in Mikro, exchanges the username and password automatically. In practice it means you're online in three seconds. Wheee!

When I say as much as expected performance is staggering. 64,000 obtains real serial download rates of well over 100Mbps. We configured the modem for 128,000 dual channel and ranged in data at around the 1500s mark! Naturally for both speed, we need a fast serial port. I was using a Port Plus Jr located at 480,000bps and the results were amazing. Web pages, ripped in,



real and more new song. It was so good they're not getting the Zyxel back. He

says, I buy ISDN and though the price has fallen dramatically it's still out of reach for everyone. For the hard man needs.

That said, he needs can't afford to be without it and the Zyxel is a superb ISDN TA supporting every standard under the sun. If you're serious about the Internet and you can afford it, get ISDN and get the Zyxel omni.net, you won't regret it. ■

Matt Bellhouse

## System Requirements

128 serial or serial port and one

## OVERALL

Brilliant and powerful ISDN TA.

**95**



# PD Scene

Cartoons, dinosaurs, galactic empires and fast, beautiful voxel flight games. Andrew Korn views some more gems from the world of PD.



★★★★★	Totally blinding
★★★★	Good
★★★	Average
★★	Substandard
★	Oh dear

## Firewall

■ **Commands** close

■ **Available From** [www.angrygame.com/Downloads.html](http://www.angrygame.com/Downloads.html)

■ **Price** £1.50 MS

Oh right then, I admit it, ever since I saw Commanders running like the clappers on a 486 at a European Computer Trade Show I've had a real soft spot for voxel engines.

I've played with things like SpaceEngines2 and wondered why no-one ever bothered to finish a game. Probably because doing something other than a flat flyby isn't practical. So it came along a month or two ago and was the closest thing yet. Fast, very pretty, capable of swooping and banking, but prone to crashing. Now we have Firewall. It's fast, pretty and stable. It's got a game too.

Let's be honest about it, the game is rate limiter. The boosted fuel tanks, tanks and guns you have to destroy are mostly clumped together and the tracking of 3D rendering is pretty poor. Trying to shoot things can be frustrating - you throw the slightest amount upwards and your missiles head on a ballistic course upwards instead of ploughing into the ground beneath your feet. None of which matters because there's a blindingly good game engine there and you just know that given a bit of time to work on it there's a few games in there too.

This is all besides the point. This is in a lot of ways more of a demo than a game. You



Run this thing up and get a chance to wonder at what those wacky coders have persuaded your little old Amiga to do this time. ★★★★★

## Galactic Empire v1.5

■ **Space Strategy Game**

■ **Available From** PD Forum, 18 Lovell Avenue, Stevenage, Hertfordshire SG1 2BG

■ **Tel** 01763 800912

■ **Price** £1 for 2 disks & the PIP

It is believed by certain groups of western mystics that each person bears within them a single, perfect invention. We can never quite guess what hidden invention, but we struggle through our lives to achieve it.

For some it may remain a distant, hazy sense of unfilled potential, for others though it is a driving force that fuels their lives. An old friend of mine has for years been possessed by the perfect space strategy board game, a bit like Diplomacy, but with lots of extra stuff in it. For years he has been trying to squeeze that game out of his subconscious, despite it seeming that Blank Space is possessed by the same motivating force, and being less keen than my friend, he has written this program.

Galactic Empire is one of the types of games that you take one look at and wonder how anyone could have the sheep to release it on any post-8-bit platform, and then go on to decide that there's actually rather a lot of good stuff in it. Presentation is terrible, with low quality pictures and one of the most garishious menu systems I have seen since using Win95. Perfectly 8-bit the other day this should get someone in to do a nice

Q&A front end and pretty graphics sequences, because he's clearly far too busy cramming features into the game and I for one don't think he should stop. It's a turn based game for two or more players. Each player starts off with a planet in a basically end-of-the-spoon-arm backwater, and has to build up an empire in order to challenge the other players for galactic domination.

There are a whole range of spaceships to build, some that carry troops on board, some that are warships or including planetary defence bases. Alternatively money can be used for hiring a private fleet to harass enemy shipping, trading with other planets, or sending spores to sabotage, insect or plant exotic plagues on other planets.

I played this game about long enough to find that throwing everything you have at the enemy in the very first couple of moves leads to total loss of all your forces. Also long enough to determine that if I played the game any longer I'd get too far into it and never get around to reading this page. If turn based strategy is your thing you are bound to find this an interesting option. ★★★★★

## Maniac Ball

■ **Arkanoid clone**

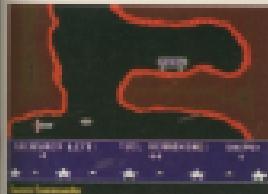
■ **Available From** Online PD, 1 The Coppers, Halesowen, West Midlands, UK B65 1PP

■ **Tel** 01754 834238

■ **Price** 75p plus 75p P&P

How can anyone justify another Arkanoid clone by offering something new, or by





## Game of the Month...

### Captured Dreams (TBL-CD)

- **Genre:** Adventure
- **Available From:** AmigaSoft/AmigaSoft/Zip-CD Inc.
- **Price:** £14.99

Games go in cycles. Sometimes comes up with an impressive effort, and other coders, being coders, decide that there want to figure out how it was done and do it better. Eventually, someone gets tired. They see some effort – from outside the game community – or they decide someone else's game programming rocks, and comes up with something new, something that will really impress the coders. Out that comes and soon everyone is trying to imitate it.

It has been a while now since anyone has tried to offer much beyond better and faster light source mapping. Mode and heavily texture mapped raytracing. This one has a fair few of the old favourites, but that, dinosaur, now that is something.

If you have a Sony PlayStation, you get a demo disk with a bunch of playable game demos. Buried in the disk somewhere is an impressive little demo which shows a very nice texture mapped raytracing running along the screen which you can move, spin and cause to move. In this demo there's also a rotating texture mapped raytracing. Perhaps not as good, and like the last that you can't control

it, it implies that it is not such a heavy piece of code as the

raytracing job, but then this runs fine on AGA and 32bit, not the 3D graphics hardware and MMIC processors. PlayStation programmers have to play with.

Don't get me wrong, there's a lot more to this demo than the raytracing, which is really just a good star. It's just that, like Jack Nicholson in Batman, that star really steals the show. Expect lots of raytraced raytraced in future demos soon. **★★★½**



image Charley Cat. Anthony's animation skills visibly improve with each new production, and even though he is still lagging a bit behind Eric Sabatier's slick professionalism, Anthony's work has an excellent dynamic.

In this installment Charley has invited his friends over for dinner only to find that he has no fish left in the fridge. There is a bit of a hiatus and other game antics as he goes off to find another one.

If there's something to fault with Anthony's work it's that the lines he uses in the shadows of his influences. A lot of the censure movements, the blues, slacks and popping mouths, come across as being derivative rather than inspired. Similarly the ending seems like the result of an incoherent cartoon logic rather than Anthony's own

talented mind. What made Chuck Jones great was that he constantly pushed the envelope. He spoke the language of cartoons, but turned his own deranged doggerel into the locomotive.

Don't take these criticisms the wrong way, this is a fine short and one that any collector of Amiga cartoons must immediately snap up. I make criticisms only because I can see a much better cartoonist hiding away in there somewhere, just waiting to find his own vocabulary. **★★★½**

## Caveman Commander

- **On disc:** ...

- **Available From:** PD Power, 10 Lovell Avenue, Ashton, Sheffield, S20 2PL.
- **Price:** £10.00 per disk £17.99 P&P

First off you've got this title, also there's a cover. And then there's some other blurb that might possibly be false. The cover's smoky, it's extremely blu to look at and in addition it's unplayable.

I should think that some person probably spent a fair amount of time working on this game and learnt a lot while they were doing so... and all that I can say is the best of luck to them. The whole learning process was probably well worth it for them and the experience should therefore be encouraged, but unfortunately not by purchasing this game disk. Is it OK if me to go home now please? **■ 1½**

doing it so well that no one cares if they already have 40 versions of the same game in their collection. This one attempts it by shucking in all those standard extras such as powerups and exploding enemies, giving you the impetus and not so common extras such as an editor, then changing the whole fundamental game structure by getting rid of all the exits for the ball to bounce off.

What happens... back up a line. Did I say no exits for the ball to bounce off? What happens when your ball heads off towards the top or sides of the monitor? You get sent with your ball too, but? Yes. Which is instantly silly you get four bounces. That's right, four bounces. Move the mouse up and down and the ball bounces at the sides go up and down. Move the ball left and right and the ball bounces bounces go left and right.

It all begins to sound like there is something really new and challenging going on here, but where Arkanoid is concerned that's just wishful thinking. The novelty of the four exit system quickly wears off and you find that it's actually pretty similar to this as any other Arkanoid clone. A good one, and definitely a clone that deserves a place in the collection of every Arkanoid fan, but I'd have to say the last. **★★★½**

## Charley Cat Quickie 4

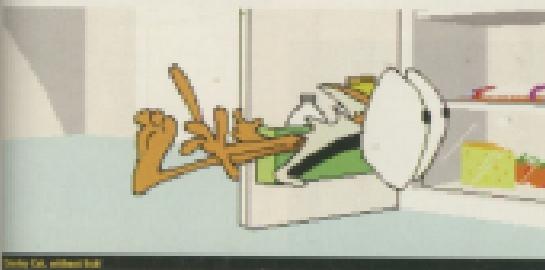
- **Cartoon:** ...

- **Available From:** Robert Grove, PO 130, 1000 West, Hightstown Station, NJ08520, USA.

- **Price:** £19.99

- **Price:** £19.99 for 2 disks plus £6.99 P&P

Good old Anthony Whitelock, eh. He's back at the helm, slinging over a fat Minestrone string us another Warner Brothers' mode cartoon featuring his favorite trouble prone



Charley Cat, cartoon cat

# PD Utilities

Another selection of utilities are placed under the spotlight by Andrew Korn. Directories, slide shows, graphics handlers... he casts his verdict on the lot.

## Utility of the Month...

### SuperViewNG

■ Type: Graphic Handler

■ Available From: Classic Amiga PD, 11 Overgate, Radcliffe, Manchester M20 2SH Tel: 0161 723 1628

■ Price: £1 plus 25p P&P per order.

Now this is a serious piece of work. You can tell from the start that you're dealing with more than your average piece of PD when the disk consists of an archive containing 2MBs of data. When you look into the features list and the PowerPC support, you see why the author thinks that being too tight to pay the 30 DEM (£10) registration fee is a bit out of order.

SuperView is an image manipulation/conversion/display/screen grabber utility with almost a billion features. It may have a nice easy to use GUI front end, but make no mistake, this is a serious power application.

This is an ideal package for people who wish to do a lot of manipulation. The schools idea behind this package is

that it's quick and powerful. No large application to load up, no elaborate front end and the using straightforward keys. Just a nice simple decommissioned GUI which sits on your Workbench, challenging you to find some obscure file formats that it doesn't know.

SuperViewNG is highly modular, based on the SuperView library and a plugin system. Adding new file format readers or new effects operators is just a matter of dumping them in the right directory. The PowerPC support (which will be added as a plug-in) will automatically take advantage of the enormous speed increases PowerPC accelerators will offer.

There just isn't enough space available to go over all the features of SuperViewNG here, so listen to my advice and get the demo to try it for yourself. The demo has images and only saves as BMPs, but will give you an extremely good idea of what the package is capable of. Most definitely a must for serious graphic users. ■■■■■



★★★★★	Totally blinding
★★★★	Good
★★★★	Average
★★★	Substandard
★★	Oh dear

### DiskMaster 2.1

■ Type: Directory Utility

■ Available From: PD Power, 15 Lovell Avenue, Astley, Shalford, SO20 2BL Tel: 0208 267 0211

■ Price: 50p per disk & 75p P&P

Directory utilities have come a hell of a long way since the likes of CLIMATE first hit the Amiga, and like CLIMATE, most directory utilities have now adopted a two window plus toolbar look style.

SD, DiskMaster and Directory Open have all followed this path, until quite recently that is. Directory Open transformed the genre with OQpus, SD, moving towards a multiple windows/filtering buttons approach, which融入s the functionality of Workbench together with the more traditional directory utilities.

As Magellan's most recent incarnation, OQpus has become extremely capable of replacing Workbench. Whilst the majority of people who have come into contact with Magellan do rate it extremely highly, there are still a bunch of holdouts who much prefer the old, two list-style of directory utility. I expect that these particular weird interests should be considerably happy with the most up to date incarnation of DiskMaster.

DiskMaster is a power tool. Sure enough, it doesn't support multithreaded multitasking, but what it does have in its favour is a reasonable degree of mouse recognition and a highly configurable button system. Buttons can be simply changed and programmed, and it will do a fantastic job of browsing through the latest Amiga disc, file-copying files and displaying pictures.

Unfortunately the presentation would appear to be a little bit lacking and it features less gadgets under than buttons - which could possibly be good in terms of clarity, but it's certainly not something you'll want to keep staring at for long periods of work time.

Nevertheless it will do a lot though, and if you are overcome with a feeling of desperation to escape from the modern era, then this is just one of the ways you can do it without missing out too much on the power stakes. ■■■■■



## AGASSIM Demo

■ **Type:** Video Software

■ **Available From:** Studio Transgo P.O. 1, 1000 Mill Close, Goldthorpe, Rotherham, S61 9JL, UK. Tel: 01229 881120

■ **Price:** £199 plus £10 P&P

You might think AGASSIM stands for AGA, VideoShow Master. You would be right. Except for the fact that AGASSIM works fine on EGA systems as well. Really. If there wasn't enough trouble without people like AGASSIM author Paul Turner adding in and randomly distributing features entirely contrary to the acronym.

AGASSIM is driven from a nice GUI front end. It sequences a slide show from a series of objects, which may be graphics, animations, sounds, music or even BBSes scripts. A collection of slides is provided, and each one is selected by clicking on the icon menu bar. Even producing quite complicated slide shows with AGASSIM is entirely not easier than you'd think.

The program even does a good job of image recognition, offering only the appropriate choices to you when you select an object. The potential of the slide part is intriguing. The obvious possibilities this offers is to extend its current level of functionality. You could, for example, include an Alias script which sent a Mail BBS email to a Project RG if you wanted fully 100 level nested output on a Project RG equipped Amiga.

The one thing which I found disappointing about this program is that there's no support of alternative filetypes. Samples, per, anims, zip all PPF only. True, it is advantageous for a slide show to have the data in a form which is quick to display, but it would be nice if this package supported a few industry standard formats such as jpg and png graphics, AVI and QT movies, and MP3 samples.

The demo gives you a good idea of what is in store, but if you are after a decent slide show maker, then it's better to save yourself the bother, and just go straight for the full version instead. It works out more expensive, at only a couple of pounds extra. ■■■■■

## Class HD Utils 2.2

■ **Type:** Utilities/Assessment

■ **Available From:** Classic Amiga P.O. 11, 1000 Mill Close, Goldthorpe, Rotherham, S61 9JL, UK. Tel: 01229 881120

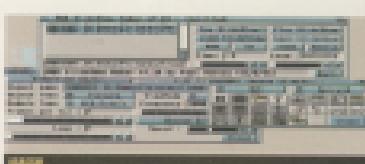
■ **Price:** £1 plus £1 P&P per order

Those weekly checks from Class HD are at it again, checking out disks connected with little utilities. Last month's disk as a piracy template for FlashWriter, a random Workbench iconsize checker, a Workbench version checker which checks MUI versions too, and screen blander which takes icons etc. in the middleweight category, is a file viewer - basic but pretty useful - that's useful for people after a small executable for encoded floppies.

The two most interesting packages are AcidInstall and the 4 Unzip - decompress utilities. ZIP is the standard archiving utility on the PC, and rather not as efficient as it is. There's been Amiga versions of ZIP available for a while, and it's essential for anyone likely to move their classifications to form. GUI 4 Unzip is a simple script using requirements and requires to handle the GUI interface for the unzip command also provided. AcidInstall is a more sophisticated unarchiving utility.

It is an app icon which sits on your Workbench waiting for files to drop on it, unzipping anything you feed it to a specified directory. AcidInstall only unzips ZIPs, to the directory they're loaded from which is a pain, but then GUI 4 ZIP does a great job of this - all mouse driven - with sensible destination. ZIP contents listing and file integrity checking.

For another quality bundle of tools from the Class HD guys: ■■■■■



## Best of Aminet

The Aminet wasn't active this month. Is it still in the Amiga freely distributable software ranking at least? Hardly. What actually happened is the Aminet filed up. Worldwide, the Aminet's home, its last on line on a 100 Mb RAID server, lots of uploads disappeared whilst this happened. But there was still plenty to see, do and download.

If you have been using our WebOpus server, or upgraded to a newer version, you really should move on down to WebOpus. Probably new arrivals in that neck of the woods include WebOpus2, WebOpus2.0 (199) which has a whole bunch of Amiga extensions. If you are on WebOpus 4, you'll still find things in there of use like recent uploaded, lastopus/VCopyplus (199), a version checking copy command.

Want to network a couple of Amigas together? Don't wait for the next OS Amiga article; connection/etherlink 2.0 (200) may be just what you're after. This addition contains a device driver and the hardware schematics for a happy 300Mhz's parallel serial link via the floppy click port. Don't get too excited about that enables connections, this isn't a true serial connection, but should make an excellent alternative to serial.

Check out RTUnits at www.64multi.com (79), a couple of CLI commands which use the traditional Macintosh WDEBox as a command which replaces the standard requestpstatus command, and requesting string returning function. More info. Something for the less advanced user? Peter Henshaw's guide to hard drives could come in pretty handy at docs.hanshawville.64.

As always the Aminet provides fun as well as usefulness. Regular readers should have picked up on my filing for rated engines. Latest example is sheetz in Alastair Robinson's office at game/demo/HMPPVasel.lha (199). This one is an attempt at a voxel driving game. It's in the early stages yet, but well worth the download. This month's pic of the month is Davide Rigan's rendered version of Robert's painting of the temple of Karnak, which can be found at pictraces/picasa (199).



# Why Apple?

One day we all hope to see the birth of the Amiga with a PowerPC processor and other new features to establish it as compete again with today's systems. Sadly though, more than 3 years since Commanders demise, little of substance has actually happened. Here are prototypes and band promises, we all hope to see new things develop soon.

If you can't wait and need more performance today, without paying the price... there's only one real alternative to consider. There's never been a better time to think Apple.



Only Apple offer you both desktop and portable computers that truly match the ease of use the Amiga brought to your desktop. Affordable Apple Macintosh systems have PowerPC™ RISC processors with thousands of off the shelf programs available in areas where the Amiga was always previously so strong.

And, if you need the most compatibility of all computers, Macintosh is currently the only system that can run MacOS, DOS and Windows applications via optional DOS Cards or 32bitWindows software.

**Portable  
Power**

YOGA FOR  
STRETCHING  
AND  
RELAXATION

Newton  
Webb

•*Once you're writing or drawing, you'll notice your mind will be much less busy than it is when you're not.*

First/Initial:	Surname:	Daytime Phone:	Evening Phone:
Address:		Main user(s) of computer: <input type="checkbox"/> HOME <input type="checkbox"/> BUSINESS <input type="checkbox"/> DOOR	
Current computer and accessories:			
Country or Country:	Postcode:		

此圖一作《萬葉集》卷之三。

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TEL 01773 82071 • FAX 01773 82060 • E-mail: info@ghc.co.uk

# Why Macintosh?

## Performance

All Macs are PowerPC based. From entry level desktop systems up to iMacs with 2.5GHz processors and up to 1000MHz multi-processor options at the top of the range. Power Macs also feature the only multi-processor computer technology available in the entry consumer computer market able to make the most from the latest 3D complex induction and computing processes in the design and build. iMac features unique 3D rendering processor technology - a world of exciting full hardware compatibility with previous software.

Processor (MHz): Pentium 386 300MHz to 1GHz



## Entertainment

Over 1000 media software packages written specially for PowerPC. Previous Macs have been shipped with Power Macs now included in iMac - plus there are thousands of exciting programs which can also be used. Industry leading programs such as Word, iWork, Final Cut Pro, Page Layout, Page Flip, iDVD, QuickTime, Photoshop, PhotoShop and many others have all been developed for the Mac.



## Productivity

- Macintosh still dominates the computer world with over 50% market share in desktop publishing.
- Over 50% of printmaking is done on Macs.
- Macintosh is the most widely used system for the creation of memory web pages.
- Mac computers popularity due to ease of creating right now as created on Macintosh.

## Entertainment

- Apple is the World's No. 1 manufacturer of PC games.
- all desktop users have a fast 200MHz processor as standard (many models have up to 400MHz).
- In 1999, 41 of the top 50 selling PC 200MHz games worldwide were developed on the Macintosh.
- Many Mac users have satellite TV with satellite or TV cards can be inserted directly to disk in QuickTime movies.
- Many Mac users have built-in video in and out for direct connection to TVs.
- Several Macintoshes have internal digital video editing facilities as standard and many others can be upgraded to include this facility with ease.



## PERIPHERALS

**MONITORS**  
Apple's range of monitors are the best in the world. From the 12" iBook Colour to the 21" Cinema display range.

**KEYBOARDS**  
Apple's range of keyboards are the best in the world. From the 12" iBook Colour to the 21" Cinema display range.

**MOUSE**  
Apple's range of mice are the best in the world. From the 12" iBook Colour to the 21" Cinema display range.

**CD-ROM**  
Over 500,000 Macs have CD-ROM drives.

**CD-RW**

**MEMORY CARDS**  
Apple's range of memory cards are the best in the world. From the 12" iBook Colour to the 21" Cinema display range.

**DISPLAYS**  
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**KEYBOARDS**  
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## Entertainment & Communication

- All Macs are Internet ready, many include a 2.5Mb or 56K modem with full email facilities and an integrated management facilities.
- Industry standard web browser.
- Netscape and Microsoft Internet Explorer were developed for the Mac. Both give full access to all Web sites with new features page history feature like auto-saves and auto-searches.
- The iMovie standard feature for Windows, an built Apple product. Of course iMovie comes in standard with every Mac.



## Connectivity & Expandability

- All Macintoshes have remarkable built-in or standard networking options including adding shared printers etc. provided by your ISP.
- All Macintoshes have an external SCSI connector as standard - adding external drives, cartridge drives, scanners etc. built in Plug and Play.
- Easy-to-use digital cameras can be plugged into the Mac via either FireWire or USB port.
- Firewire is industry standard for Macs and can be used on desktop Mac systems.



## Education & Training

- Many quality Macintosh titles are widely available. Doing Macintosh software equivalent for the Mac. Disney Pixar and Disney's The World's Best Macintosh painter, house. Computers play Disney's the new Macintosh in play software series within many educational establishments, high quality software is assured.

## Education & Training

- Expanding Macintosh titles, titles from Disney Pixar, Bill Gates, Steve Jobs, Bill Clinton and the Big have all been developed for Macintosh.



## Storage & Presentation

- Connecting and using video cameras (Sony Hi8, Hi8 Pro, Hi8 Video, etc.) Apple's video cards or Macs are very easy and the results are truly outstanding.
- Easy software packages are provided offering image manipulation and expert photo quality.



## +

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# CD-ROM Scene

**A round-up of some of the choicest discs about for all of you 'sorted' CD-ROM drive owners.**

## Dinosaurs ROM

■ Available from: Power Computing, Unit 10a, Sanger Way, Kempston MK42 7PU.  
■ Tel: 01234 851500  
■ Price: £39.95 + £2.50 P&P



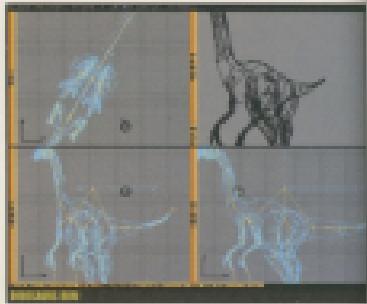
dimensions of that sort of quality, there's just like a look on this disc.

Believe it when I say the stakes in this field are very high indeed. The standards IBM set in Lost World and Jurassic Park have had people to expect extremely like the dinosaurs with accurate textures, good movement and highly organic shapes. Taking a look at the price of this CD, you'll see that this is very much a tool for the professional user, and if you are trying to make a living,

it's typical to release this, given the current success of the pretty - but vicious - Lost World, the follow-up to Spielberg's mega hit Jurassic Park. The effects wizards at Industrial Light and Magic see us over the stars of these two blockbuster movies, their CGI dinosaurs astoundingly making up for the utterly abysmal plot and acting.

Amiga were apparently used in the design stages of these models, and if you doubt for a single moment that an Amiga could be capable of producing CGI

you're going to want models which are good enough to stand up to the high expectations set by the Spielberg movies. Fortunately the models on this CD are really pretty good.



you're going to want models which are good enough to stand up to the high expectations set by the Spielberg movies. Fortunately the models on this CD are really pretty good.

The disc has 10 models on it: a tyrannosaurus, a gallimimus, plesiosaur, pterosaurus, triceratops, brachiosaurus, plesiosaur, a velociraptor, and - off species if not exactly off topic - a shark and a mosquito. The models all come with bump maps, colour maps, and specular maps. They all have bones to facilitate animation and inverse kinematic features.

The models say in their formats, Images, Lightscape and 3D Studio .obj, that isn't an Amiga package, this is a multi-format disc. Rather disappointingly the Images models seem to have been designed with Images for Windows users rather than in mind that Amiga Images users, as the files are all in Targa format. However, it should be perfectly possible for someone to copy the models to their hard drive, then assign the path where the model will look for its attribute files and convert the textures to TGA.

The Lightscape models have bump maps in TIFF and Targa format already. Lightscape doesn't have such rigid path setting commands built into the objects as Images, which is why it's possible for them to do this. For Images they would have had to repeat the model sets for TIFF and Amiga Images versions. This would have used in the region of another 100MB or so, which would have meant dropping something from the disc, so the exclusion of this is perfectly understandable.

There are a lot of extras on the CD. As well as the main formats, the models are also to be found in VRML and AutoCAD formats. There is a nice collection of sample pictures to show you the kinds of things that can be done with the models, and short ani-

## Amy Resource - European Edition Vol.1

■ Available from: Ward Systems,  
21 Tress Way Business Park, Humberstone Lane,  
Leicester LE11 8EA.  
■ Tel: 0116 268 5800  
■ Price: £19.95 plus £1 P&P

Hi there, yet another CD collection. There are enough of these on the covers of maggs, why pay twenty quid for another one? Well if it's as good as this, that's reason enough! This first European Edition brings to a wider audience the Italian Amy Resource discs, clearly a top notch collection. This disc just goes one and a half times to detail, closer to the specially provided Euro Discovers covers and the reproduction of the cover image on the CD itself.

The contents of the disc are along the lines of most other similar collections. There is an array of pictures, games, quizzes, important tools and so on. A fair bit of attention has been paid to making everything work nicely from Windows, the picture galleries being a notable example. Each directory is accompanied by a preview file, which allows you to view a catalogue of the directory's contents and view them there. As well as having all the standard click-to-select stuff there are also some rather hefty directories of archived software which you click to dearchive.

Perhaps the most impressive part of the disc is the commercial and registered software. You will find shareware versions of Photo 3.1, Turbocad 4, DrawStudio, PCplus, Scott Games, Share C,

Storm Ward, and a loads more. A good collection, although you'll probably already have a few. On the other hand,

the fully registered versions of Amiga 2.1.2L, Image Studio 2.1, WebPlug 1.22, Pragib2.4, Paintbrush 1.08 and Backblit 1.4 is a rare and excellent bonus indeed.

As with all such collections, one overriding issue is how much of the software on the disc you already have. This is not a cheap collection, but if you've got a lot for your money, the registered shareware is a quality collection and one that you'd have to work at to get from other sources. Ultimately if all the software I've mentioned doesn't interest you and you collect all the Amiga discs, there's not a lot to offer, but this is a brilliant example of its type. Top marks to Lucas Games of Imagesoft for a top CD. **92%**



nations of each model in P.U., AVI and CT formats to show how well they can move. The models even come in low polygon formats for users with less memory to spare. There is no doubt that you're unlikely to find a better one on this CD unless you are pretty serious about your animations.

It's probably be happen with the money spent if you are a Lightwave user than an Imagine user, as the Lightwave models have a clean edge, most notably in the human models. Overall this is a very professional production, with good models and a very professional price. **88%**

## DEM ROM

**■ Available From:** Wind Science, Q-Town May Business Park, Hunslet Lane, Leeds LS8 8HA

**■ Tel:** 0113 248 3000

**■ Price:** £9.99 plus £1 P&P

OK, so we gave you Vista Pro last month. He gave you a bunch of DEMs. But where can you get hold of some more? Here is the simple answer: This CD-ROM from Graphic Data is certainly being overlooked out of Wind Science at a very nice price.

There are over a 1000 DEM files on this disc and each of these are topographical models of a part of North America. The DEM or Digital Elevation Model standard was developed by the US Geological Survey team to present a form of mapping system which would record full 3D data of a landscape. It simply works by dividing up a plot of land into a grid and then recording the height of each element in the grid.

The information can be stored in ASCII format and represented by a computer DEMs such as these can be read by Vista Pro, Scenery Animator, and also by certain

## Aminet Set 5

- Available From:** Wind Science, Q-Town May Business Park, Hunslet Lane, Leeds LS8 8HA
- Tel:** 0113 248 3000
- Price:** £94.99 plus £1 P&P

Here we go again, another Aminet Set, another CDU Amiga concentrate. This collection contains 41 CDs of Aminet archives, covering the software uploads to the world's largest site, over the past few months. There is about a gigabyte of data on these discs which will never be on the regular Aminet CDs, and you get UltraMIDI Sound Studio, a great bonus if you didn't get our March issue when we gave it away, plus Amilities and Cables 2.0.

The collection of uploads includes around 41 gigabytes of software in around 7,000 archives. Check the table to see the breakdown. The discs, as usual, are well arranged with the new traditional Aminet front end. You can search for whatever you are looking for, you can browse your way through the discs, and when you click on an archive, it will either unarchive or play.

Whatever you like...

The contents of this CD, as you would expect, contains everything from the utterly dire to the truly wonderful. There is some of pretty much everything, but with this amount of data, what else do you expect? The ultimate CD collection. Once again, **94%**.



## Aminet Set 5 contents

File	Size	File	Size	File	Size
dev	711MB	dev	46MB	demo	811MB
disc	711MB	disc	711MB	games	271MB
docs	85MB	docs	151MB	images	1000MB
hard	94MB	pic	347MB	music	801MB
				readme	41MB

### Review of Lightwave

The models on offer are mostly about a megapixel in size, offering 1000 by 1000 pixel resolutions. These ultra high resolution models are well worth getting your hands on for the amount of extra polygon data pro-

duced by your rendering package, but often the scale of the landscapes is so large you find that they appear very flat. This is because the areas covered are so large, that even tall mountains are a little short in comparison. You can get in close, but this means you are losing a lot of the resolution gain, as you can already raise the vertical scale ten-fold or so at the expense of memory.

You should ask yourself what you need this disc for if you are planning on buying it. These DEMs do look much natural than one you generate randomly, and if you want to do renders of lots of the US you can't go wrong. I can't help feeling though that it would seem a lot more interesting and better value for money if there was a better range of DEMs, as some maps of the Himalayas or Mars visual quality is better than a British DEM of some corner of Devonshire. However at this cost, you don't overpay too much. **84%**



# Art Gallery

Send pictures to: Art Gallery, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ or E-mail them to [artgal@cu-amiga.co.uk](mailto:artgal@cu-amiga.co.uk).

**Beetle by Auburn Hodges**



The colourfully named Auburn went for a colourfully produced picture. Firmly in the school of the magic realists, the use of photographic source material contrasts strongly with the hyperreal colours.

**Crusader by John Lawther**



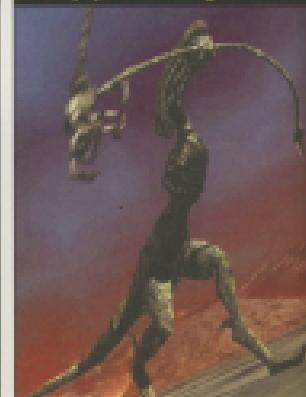
A hand drawn image of a crusading knight, drawn with QuarkX, Paint and Brilliance. The blood-spattered surplice, absent eye and various bits belie the traditional image of a Christian Knight.

**Indescribable by Andy Kinsella**



Produced using Imagine 4.0, ImageFX1.0, Photogenics and Paint. TIE may let you fly 100000s but it doesn't have scenes like this! The blur effect on the spaceship works very well.

**Pollux by Jeff Ransingh**



Jeff used Lightwave and Photogenics to produce this H.R. Giger influenced image. A very atmospheric composition.

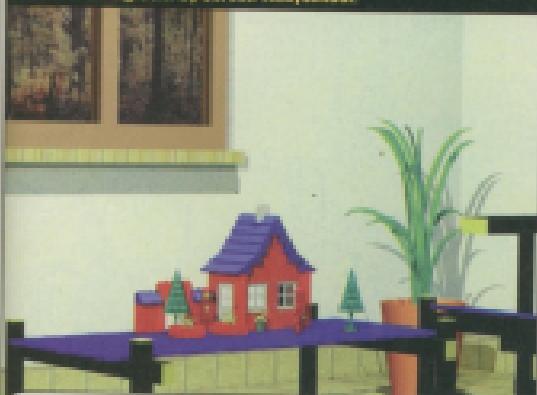
Pueblo Bowl by Vivian McAlexander

**Picture of the Month**



American artist/illustrator Vivian McAlexander produced this excellent image render of a piece of American Indian pottery with hand drawn brush maps produced in Dspair. Illustration but showing Vivian's excellent colour sense.

House in Livingroom by Aricco Hooykaas



A basic 3D render with Painter and Ingaffectools for post effects. An interesting juxtaposition of the tiny house with the house containing it. The Logo - like Go Logo! chair is a great touch.

#### Picture formats

Most contributions to Art Gallery can be found on the CH3D. Please avoid sending JPEGs if possible. TIFF, GIF or PSD give best results.

Vases by Vivian McAlexander



Another by our American reader with a penchant for Ingaffect with Dspair textures. We've seen textured vases many times but these hand-drawn textures make this one stand out.



Coming Soon from Sadness Software, the ultimate Amiga CDROM games!

# FOUNDATION

The Ultimate Amiga Strategy Wargame!

Due in November 1997, Foundation will set new standards for the Real-Time strategy war-game genre. Featuring many unique features not seen in any game for any platform!

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For more information on Amiga - Go to [www.amiga.com](http://www.amiga.com) or [www.sadnesssoftware.co.uk](http://www.sadnesssoftware.co.uk)



Full 3D and management screen

# ON E ESCAPEE

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- Can be used on Double-scanned screens.
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Four Machine Space			

# Amiga Workshop

Workshop is here to give away some of the best Amiga trade secrets and almost certainly increase your knowledge with the finest tutorials on the planet.

## 76 Imagine 4.0

In Part 10 of our tutorial John Kennedy explains the process of animating clever looking ripple effects in waves.

## 80 C Programming

Following last month's beginner escapades we take a look at the setting up of the GedTools library and its functions.

## 82 Wired World

Met Bettinson gives his perspective on a whole host of handy Internet utilities, allowing you to access with ease.

## 84 Surf's Up

More wisdom from the Lord Net God, plus a varied selection of sites for you to check out whilst online.

## 85 Surf of the Month

Met Bettinson being the Net dork that he is does his rubbery agent and catches some big wurl.

## 88 Sound Lab

Tony Morgan guides you through your first steps with Soundblaster and Project X3, plus tips for this month's cover mounted 3D emulators.

## 90 DTP

Want to find out how to create your own Guten? No need to risk a single letter, as Larry Holmoff explains...

## 96 Q & A

No Amiga question is too complicated for our team of experts to answer, well at least those questions we choose to print anyway!

## 99 A to Z

The first of a brand new feature where John Kennedy takes us through the alphabet of all things Amiga.

# Regulars

## 86 Back Issues

Look at CU Amiga's amazing back catalogue: full program cover disks, tutorials and much, much more! We know we're getting pretty low on certain issues!

## 102 Backchat

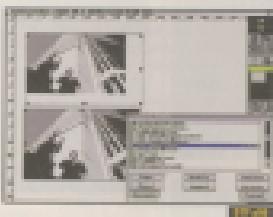
Amiga users don't have a voice? Here you can talk to all your Amiga owning peers, and swap stories, hints and thoughts about anything Amiga.

## 103 Subscriptions

Our subscription offer is extended, so if you don't subscribe yet, now's your chance to save money, and guarantee a copy each month!

## 104 Points of View

Met Bettinson writes an honest letter to the General Manager of Amiga International on how to build a bright future for his beloved Amiga.



PART  
**10**

# Imagine 4.0

Did you enjoy splashing around in puddles when you were young? John Kennedy still does it, so pull on your wellies and join in the fun.

**T**he idea for this month's project came from missing around with another rendering program, Cinema 4D, and trying to animate a realistic ripple on a pond surface. You've seen what happens when you throw a stone into a still pond – there is a splash and the ripples spread out, radially from the centre in a series of concentric rings.

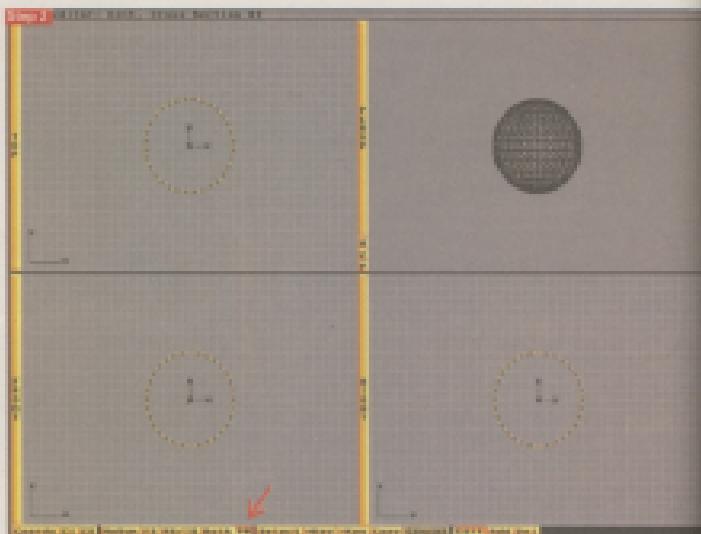
I thought about it for a while, and then turned to the ultimate rendering guru, Steve McEveley, who writes the seminal 'Understanding Image 2.0' – and has contributed these test files on Imagine's website, such as the 'Light Room' C4D package. Steve had it all worked out of course, so here's my interpretation of how to animate your own high-class ripple effect.

## Good forms

The secret is to use Forms, those often misunderstood objects which Imagine has always offered and few have ever bothered to use. Forms make creating symmetrical objects, such as a rippling pond very simple, and the final effect is considerably better and more controllable than any Special Effect option. So roll up your sleeves, create a new project and let's get started.

### Step 1

Go to the Forms ribbon, and create a new object. The default settings will suffice, but increase the number of



points and slices. The larger the numbers, the smoother the final result – although more memory and rendering time will be required.

### Step 2

Now, it's a sphere, but we can soon change that to something more useful. Switch the Symmetry to 3D Degrees. Then the centre of rotation, as this will allow us to make the maximum number of changes with the minimum amount of effort.

### Step 3

Now drag all the points flat. You'll

notice that you only need to drag one side, in one window view. Watch how the perspective view changes to become a flat disk. The ripples doesn't need to be perfectly flat.

### Step 4

What we are actually doing is creating several 'keyframes' for the ripple motion. We can then let Imagine work out the in-betweens using its physics engine, or morph between states. Select 'Save' and move the flat object under the name 'pond'.

### Step 5

Now go to the Detail Editor, and reload the pond object. Here's the important part: pick the object, and open the States window from the States menu. Select the Create option and enter a new name such as 'Rip'. Save the object again – don't worry about overwriting it.

### Step 6

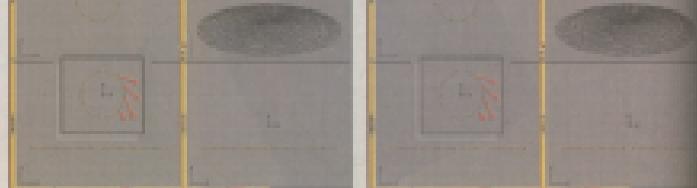
Go back to the Forms ribbon, and load the pond. Put the symmetry mode back to 3D Degrees, and now we are ready to model our splash.

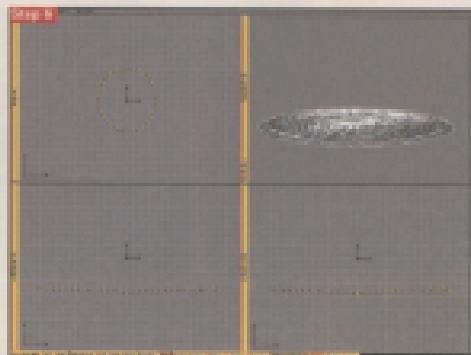
### Step 1

### Step 2

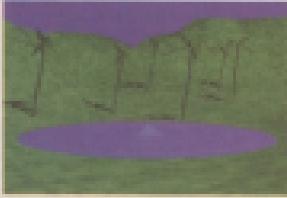
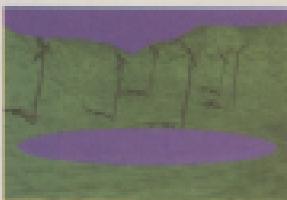
### Step 3

### Step 4

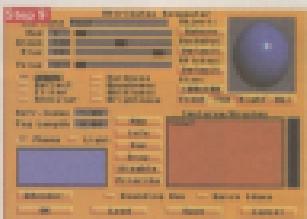
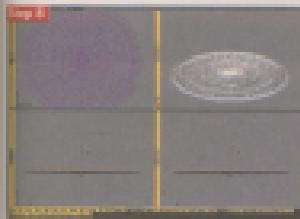




## A drop in the Ocean



▲ Several miles from the floating pond animation, control using the 'Teleport Object' technique.



Start with a tiny dimple located in the centre, like this.

### Step 7

Save the object (again, don't worry about overwriting it), return to the Level Editor, re-load the object, highlight it and create another new Scene, called 'ripn'. Save the object.

### Step 8

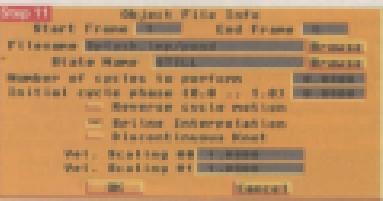
Repeat from Step 6, adjusting the ripples a little bit each time. You don't need to go overboard on the detail, and about half a dozen ripples should suffice. End up with a pond which has a smallish ripple right on its edges.

### Step 9

Finally, in the detail editor, assign a material to the pond. It's meant to be water, so make it blue, reflective and slightly transparent. (Set transparency if you want quicker renders.)

### Step 10

Now that our pond object has been completed, we need somewhere to put it. Start by creating a green landscape, and in the Usage Editor place the pond in the middle of it, with the camera pointing straight at it.



**Step 11**

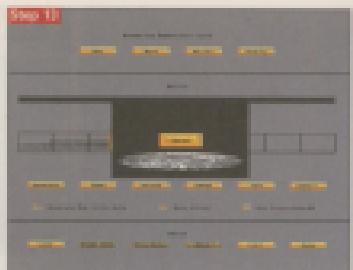
In the Action Editor, set the number of frames to something higher than 100 - try fifty or sixty to start with. Now we need to make Imagine morph between the various pond states. If you click on the pond's Actor bar you'll notice a setting for State: this is the item we'll change.

**Step 12**

Drop the pond's Actor bar into several segments, by adjusting the end frame of the first bar and then adding more segments. You need to alter the State setting to reflect the 'up1', 'up2' and so on. Imagine will morph the pond between them.

**Step 13**

Create a new sub-project file, clear some disk space and start rendering! This animation might take a



while, so try a worthwhile duration to make sure the ripple effect is working the way you expected. You may want an object to fall in the pond to cause the ripples in the first place.

**Step 14**

If you are feeling a little adventurous, apply multiple points to a flat plane of water. Offset the morphing actions for each ripple by a few

frames and 'hey presto!' you have an instant car wash.

Just perfect for modelling the typical British summer. ■  
John Kennedy

## Speeding up rendering time

Look at these two images. The one without the pond was rendered in 4 minutes 11 seconds, the other in 20 seconds. Imagine that time difference extended over a one hundred frame animation and suddenly those seconds become very valuable indeed.

The trick is to make use of a pre-rendered image, and use it as the backdrop. Of course, in an ideal world, we would love to be able to perform a full re-render with shadows of every scene. There is no doubt that rendering the pond scene with all the landscaping and trees present will give better results, as the trees are reflected properly in the water.

However, present day hardware isn't quite up to that speed yet. So instead I rendered the scene once, with full expressive shadows, but with no pond present. This scene was then used as a backdrop for the patty frame pond animation. The background brush must be the same size as the image to be rendered, and it is set in the Action Editor's Global setting.

This time there was no need for a full re-render, so regular rendering was used. This means that each frame in the animation

rendered in seconds - if I had kept the objects and rendering mode, the total animation would have taken every hour, and result'd've looked almost identical.

Choosing? You bet, that's just what image rendering is all about. If you can get the same effect in a fraction of the time, do it. Sometimes you simply can't supply all the details in the back drop. If one of the trees was overlapping the pond, it should be isolated. However, the backdrop could still be used and it could include the other trees and their shadows.

You may be wondering about background detail - if you render a reflective sphere for example, you need something which is reflected in (though it was visible in the background, behind the camera). However, there is a map around this too.

Here is another example pair of images. One was rendered

using all the objects and details, and it took 3 minutes, 11 seconds.

The other has been rendered as an 'empty set', with only the object, camera and light source present. This render took only 1 minute 29 seconds. The foreground image was supplied to the Global Setting as the Global Brush. The camera is mapped slightly more in this second image, but adjusting the size of the global brush would solve that problem instantly.

Of course, for once-only still images this technique gains nothing, but still need to add in the time taken to render the backdrop (in this case, it took 4 minutes, longer due to the extra detail in the camera). However, as

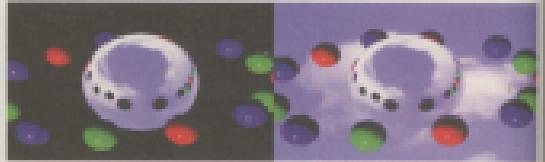
part of an animation the time taken for the once-only backdrop becomes pretty negligible.

You can use these two techniques the speediest effects. For example, when rendering a shiny logo for a TV company, switch on the global brush (but ignore the backdrop). This causes detail to be isolated in the reflection, even though the backdrop is a plain or graduated colour.

Remember too that you can animate the backdrop, and that makes it possible to create all kinds of special effects such as moving clouds or even animated starfields. You can use any frames which have just been rendered as the backdrop, creating a kind of resonance effect.



▲ Using the global brush setting, Imagine collects up to take care of us.



▲ Here are two images: one with a global brush, and one with a global and backdrop brush. When rendering with many objects, don't forget your global!



▲ Using the image using a pre-rendered backdrop can save minutes in every frame rendered.



# Amiga C Programming

## PART

# 3

Our C Programming series progresses to making gadgets this month, with the help of GadTools.

**W**e're going to follow up last month's article and split out the mouse\*. By looking at how to create some gadgets, in particular, we're going to look at using some functions from the GadTools library. Along the way, as ever, we'll be examining some of the more interesting bits of C.

### New technology

The first example on the code disk is "GadToolC". The code on the final example of last month, so most of the code is familiar:

The new bits are the (by now) obvious setting up of the GadTools library, the insertion of error reporting (using "printf"), declared in the "stdio.h" header file for when things fail, and the replacement of the obvious opening code by a call to the function "SetupWindow()". Which is where the meat of the example starts. To support this new stuff we've also had to add the prototypes of our new functions and map some constant definitions (the bits using "PDEFINER"). We will be looking at these constants shortly. But first of all we'll take an overview of the new code.

The function "SetupWindow()" does almost all of the new stuff concerning adding a GadTools gadget to a window. The basic structure is:

- 1) Get a handle for the screen on which our window will appear, using "LocPutScreen()", matched with "UnLocPutScreen".
- 2) Extract the visual information from the screen, using "GetVisualInfo", matched with "FreeVisualInfo".
- 3) Create a new list of gadgets, using "CreateContext()", matched with "FreeContext".
- 4) Create and add a gadget to this list by using "CreateGadget()", but with the freeing done by the "FreeGadget()" which was used in

the previous step.

3) Open the window to use this list of gadgets.

The first and second steps (getting the screen's visual information are necessary so that GadTools can render its gadgets in an appropriate way. The main issue here is working out the correct pixels to render the 3D box.

The last step (opening the window) is actually done by the function "CreateWindow()", which is very similar to the code we used last month, as we'll see. Once the window has been opened there are two messages to handle (generated when the user interacts with the gadget), so "HandleGCMPI() has also been updated.

### Inspect a gadget

Getting down to the nitty-gritty now, the most interesting part is the code creates a new button gadget, the fit in a "NewGadget" structure (shown below, for the variable "newGadget") and pass this to the "CreateGadget" function. (The "NewGadget" structure is defined in the header file "GadTools/gadgets.h".)

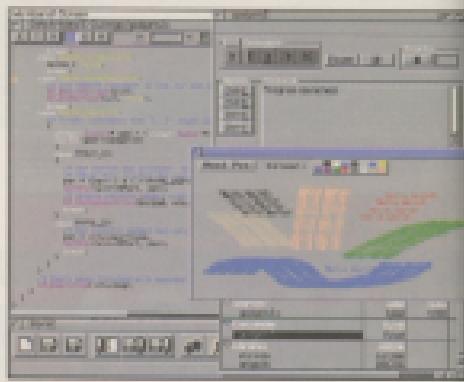
#### Box example 1

Most of the data used to describe the gadget is taken from the constants defined at the top of the file (using "PDEFINER"). There are the things like "HMOVE", "LEFT", and "MTEXT". TEXT". The other bits are the interesting parts. The first is the use of "offleft" and "offtop". These are needed because the gadget position is specified relative to the window's perimeter, not relative to the inside of its borders.

Luckily, we don't need to have a window open to calculate how big its borders are, we can get this information from the screen on which it will open. Hence, "offleft" and "offtop" are initialised like this:

#### Box example 2

The value for "offleft" is nice and



4) Box.gad is a multi-coloured model

simple: it's the size of the left border for all windows (with borders) that span on the screen. The value for "offtop" is a little more complicated. It has to take into account the height of the title bar, which will be dictated by the size of the screen font. You can find this calculation in a standard editor.

### Topaz or not Topaz

The last point of interest is the setting of the font that the gadget will use. The standard "Topaz" font has been chosen, mainly so that this example will work for everyone. To define the font, we've initialised a "TextFont" structure (the "topazFont" variable). Given my's above this, we use a pointer to this data for the gadget's "rg\_TextFont" (by specifying "topazFont" as the value).

#### Box example 3

The fields are fairly obvious, except maybe the last two. The "ta\_Skip" is whether the font is to be emboldened, italicised or underlined. Zero means not just the plain font. You can find flags for specifying styles in the standard include file "Graphics.h". They're the constants that begin with "TOP". The "ta\_Flags" specify some more intricate details about the font and should probably be left at zero.

There's a subtle simplification here: we know the Topaz font exists in all Amigas, so we know the gad-

get will be able to use this font. If we'd specified something like "TOP/Font" then we couldn't guarantee the font would be available for direct creation. In this case we'd need to augment our code to include an "OpenFont" and "CloseFont". We'll come back to this in a later tutorial.

If we specified the gadget's "rg\_TextFont" to be "NULL" then the default font (i.e. the screen font) would be used for the gadget. We would then have to make all our gadget sizes (and positions) dependent on the size of the font (since the screen could be using any font). This is known as "font sensitivity" and, as you can imagine, it's often a difficult task to do properly. For this tutorial, we'll stick to using the Topaz font so we can guarantee it will work nicely on all machines.

### Making gadgets

At long last, the most important bit: the creation of a real live gadget using the "CreateGadget()" function.

Notice that we need to pass a pointer to the "NewGadget" data we created, so we specify "newGadget" as the third argument, and not "new\_gad" (which would actually cause a compiler error and thanks to C's strong typing).

#### Box example 4

The result of the "CreateGadget" call, "gad", is

## Macros

The keyword "Macro" is used to define a macro. In the first example program, "WYAD\\_LEFT" is defined to be a macro that evaluates to the number 10, or more precisely the text "10". Whereas "WYAD\\_LEFT" cannot be replaced (referred) by "10".

So, why use a macro instead? Well, the benefit is that you can instead of going to all this trouble? Well, the benefit is that you can group these constant definitions together in an easy-to-find place (like the top of the file), rather than having to trust to the places where the values are used. And, if the same (global) value is used in several places, then you only need to change one line (the macro definition) to change all occurrences of the value. Plus, it gives a readable name to a value, and this is a vital aid to documenting your code and making it easier to understand (for others, and for yourself at a later date).

However, there are some well-known pitfalls in using macros. The biggest one is that use of a macro will be replaced by its definition at compile time, so the compiler tries to understand the text. You can do some great things whilst using this feature, but normally it's something to be wary of. The approach we've used is to define our macros to be values in parentheses, ensuring that the textual substitution will straightforwardly yield either the value we wanted or cause a compiler error. A good introductory C book will explain this in more detail, if you're interested.

specified as an argument to "CreateGadget" and used to read the result.

This links together the gadgets we create and it makes the code for making several gadgets nice and simple (as we will see). The actual list of gadgets that the window must use is now stored in "glist", the address of which was originally passed to "CreateContent".

## Gadget window

The function "CreateWindow()" contains code that will probably be pretty familiar to you.

The significant differences you will see are the addition of "WID\\_TOMODIFY" (to enable us to hear messages from the button gadget) and "WID\\_REFRESHWINDOW" (a requirement of using GadgetList to the "WA\\_GADGET" tag, the use of the "WA\\_Gadget" tag specifying the gadget (or we created as the tag data), and the "GT\\_RehypnotiseWindow" call after the window has been opened.

The "HandleGOMPT" function is very subtly different: it must now use "GT\\_GetMag" and "GT\\_Rehypnotise" instead of "GetMag" and "Rehypnotise". That brings a nice advantage: the result of "GT\\_GetMag" is a "struct InOutMessage" rather than just a "struct Message", so we can now some of the clutter of doing casts. The rest of the code is unchanged, except that we prevent drawing over the gadget by checking the message's position. Plus, the "WID\\_REFRESHWINDOW" mes-

sage must be handled (the code is another idiom), and we can tell an button pressed like "WID\\_GADGET\\_UP" message. With this the button press change the colour we use for drawing to the pixel pen. Try out the example to see exactly what will happen.

## The same program

The next example, "gadget3.c" (see you spot the link?) is identical in function to "gadget2.c". The differences are:

- A different style of opening libraries is used. The opening and closing are separated into different functions, and this can be done because the library base variables are global (and initialised to "NULL") in their declarations.
- A small number of textual optimisations can be made: "glist" can be initialised in its declaration and so can "gadgetList" (although such structure initialisations should be used only when dealing with small and simple structures).

- The results of "CreateContent" and "CreateGadget" don't really have to be checked until the last "CreateGadget", since that will fail (i.e. return "NULL") if "gad" is "NULL", and all successful allocations will be deallocated on success by the "FreeGadgetList" call. This can help to simplify things when creating several gadgets.

A variation on this ("gadget4.c"), backed the pencil used to draw for the attempts to open a library, although it is fairly safe to say that you can continue

## Code examples

### Example 1

```
struct WinGadget wengadgets
{
    /* Set up our first gadget */
    wengadgets.tag = WIDGETTYPE;
    wengadgets.wid = WIDGET_ID;
    wengadgets.colour = 0xFFFF00;
    wengadgets.wid = WIDGET_UP;
    wengadgets.colour = 0x000000;
    wengadgets.wid = WIDGET_DOWN;
    wengadgets.colour = 0x000000;
    wengadgets.wid = WIDGET_CLICK;
    wengadgets.colour = 0x000000;
}
```

### Example 2

```
int offX, offY, offZ;
/* The address of our window borders */
offX = 100 - WindowWidth;
offY = 100 - WindowHeight;
offZ = 100 - WindowDepth;
offWidth = offHeight = offDepth = 10;
offX -= offWidth;
offY -= offHeight;
offZ -= offDepth;
```

### Example 3

```
struct WindowList topWindow;
/* Setup basic description for top box does not
 * have PointTo, so base = "Page_Front",
 * topWindow.wid = 0
 * topWindow.colour = 0
 * topWindow.wid = 0
 * topWindow.colour = 0
```

### Example 4

```
/* Box create it and add it to our list */
if (gad == CreateGadget (1000, 1000, 100, 100, 100, 100))
    /* CreateWindow (glist); */
else
    printf ("Error: could not create gadget\n");
```

### Example 5

```
/* Print when reached the end of the palette gadget's
 * contents */
gad = (gadgetList + 10) - palette.palette;
```

right on ahead and ignore it.

## Small friend (palettes)

The next example, "gadget5.c", creates a palette gadget next to the button, so you can now just a put a colour choice. This shows how it's just the last call to "CreateGadget" that's important, in terms of checking errors.

The interesting bit of this example is the way the palette tool, "Colour", is used as a label, the specification of tags to describe various attributes the palette gadget should have, and the way we can decide which gadget generated an "EACHP\_GADGET\_UP" message (in "HandleGOMPT"). There's also a trick using "L" to introduce a new scope within a "case" so that the gadget pointer, "gad", is in local to the code that uses it all the time.

The final example, "gadget6.c", provides the final point. We remember the result of "CreateGadget".

for the palette gadget in a global variable, and use this to update the palette gadget selection when the user clicks the button.

A subtlety is that now we must limit the "gad" variable to the range of the palette gadget when it is incremented, so we therefore use the modulus operator, "%", and the bitwise operator, "&" for calculating the number of colours from the palette depth.

### The example 6

The code to update the palette gadget uses "GT\\_SetGadgetGadget" with a short tag list to specify the attribute that we're changing ("GT\\_PALETTE\_Colour"), the selected colour.

There should be plenty here to play with. You could even try making other kinds of gadgets. Try taking a look at the "libnewgadgetlist.h" header file and see what you can discover! I'll be seeing you next month! Until ■

Jason Hollance

# Wired World



In this month's comms column we round up half a dozen useful utilities and techniques designed to enhance your Net access, including a crash course on IRC.

SyncCheck 0.5.1

Using the Internet without a battery-backed clock in your Aruba can be a problem, but it's not impossible. If you're using MySQL, you can simply click on the Set Time wizard on the TCP/IP page of the MySQL GUI.

Then image 132,653,158,159 in the box which is an Alvaro Chacón photo opened in the US Government in order for the to work, would need to make it nothing in the public domain. You'd need to set an enforcement metadata called "132" You then associate this with the file location line in the LRU.

THE TEST

This will create T2 in your DW directory. To save file, copy and paste. Naturally, if you do this in another file, you'll have to use Insert > Change the SMT. DWCFP users might like me, as there's an excellent little DWCFP add-on called SyncClock which performs exactly the same operation. You can find this on the Arneke's SyncClock page at <http://www.arneke.com/syncclock/>.

Managing Wind Energy: A  
Practical Guide

You need to associate SyncLock with your C# default path in the configuration file, for example, `path="C:\inetpub\wwwroot"`. You should import that line in place of a script that you'll often you link up. This does vary from ASP.NET setup to setup.

BIOLOGY

Many web browsers have an `audio` tag, which can play an MP3, sounds, etc. If you have MP3Play or MP3 support connected. Currently, the only browser I know that properly supports the `<MP3>` tag without playing MP3s is AbiWord. The code for detailed here is similar for the other browsers but, as of yet, aren't supporting `<MP3>`. These settings will have no effect.

Although it is necessary to inquire how one may depend on the *Carthaginian* settings given, the last part, however, contains descriptions of what Africa will do with various Melungeons. This method

is common to all web browsers. We need to add a distinction for IE and to do this, click ADD and choose **new rule/condition**. What the user does next, you'll find has happened on a staged special. Change the action assigned to external program. Now the command of our choice will be launched. Insert GM OMPlayer application and then the following line as the argument:

www.elsevier.com/locate/bsbr

The line might be complex but it's worth it. The CDM part opens a file which GMPlay is launched at. So, we can click on it and press Control+C to stop the file. The file is placed there so that the CDM opens on the right screen. The volume, frequency, Mimo and other settings are just GMPlay settings at a low GM usage, useful for web browsing. See the GMPlay documentation for discussions.

Alternatively, if you built last year's kit, perhaps last year, or if you are using a second earlier part that you built recently, you can open the express compartment on the top panel.

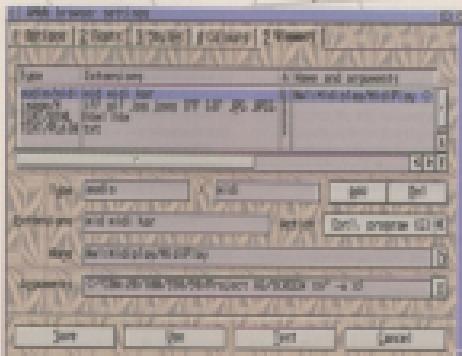
From the full paths to your targets, copy-and-paste in the same package. Use the link in the document.

This will disable the window so we can't open to launch MPCWine's window or a public session from the GUI. Instead only the window appears in a new DOS window. The RARs are then piped through Pimped-3 for excellent quality audio with virtually no CPU time. Press Control-C to exit.

## Bookmark connections

If you've changed your browser or Internet app, the look of your long lost up bookmarks can be a source of pain. Fortunately there is a tiny little utility called Bookend 2 for Mac OS X. You can find it on our CoverCD in the Macintosh/Macintosh category or on the software download page.

BookDoc will convert all Arrigo browser bookmarks between each other, but also interestingly it will convert NetMage bookmarks. So if you use NetMage at work or Uni, you can pop this bookmark manager in.



**ANSWER** The support force with 2 blocks was not long enough for the blocks to move.



► **NET** is the result of the **NET** flow minus losses to the **NET**.



### AmIRC's servers panel

your friends and comment in your IRC. Use the Amiga browser. Great stuff. AmIRC has a cool little GUI. All you do is select the source bookmark file and type the address to the internet you want to connect to. It even saves them, just as plain text.

### IRC

IRC stands for Internet Relay Chat. It's a real-time conference where many people can talk to each other in the same time. There are several IRC networks and lots of "channels" in each network. You can even see who's on, in any topic you like. The Amiga standard IRC software is AmIRC, which is (supposedly) the best IRC client on any platform. C12NetConnect users will have that as standard, and anyone else can get a copy from [www.c12net.com](http://www.c12net.com) or [irc.cheesecake.com](http://irc.cheesecake.com).

The first thing you need to do is choose a Nick (username for yourself). This might be a shortening of your name or anything unique to you. Enter your real name and user name if this isn't shaded out (most likely if you're using AmIRC). AmIRC has a load of servers pre-programmed and they may or may not work.

There won't be entries for the networks after you're fully polling.

These servers in the list, just click New Server place or replace it for the server in the name and type the port and password. In this article, a short description like "IRC AmIRC" is the only box you need to click. Now click on the selected server and he connects, giving you a list of users.

### #Teeting 123

There will be some delay while AmIRC negotiates a connection. Eventually the introduction for the server should scroll by. The first one is to type "JOIN #Teeting 123". Suddenly you'll be launched into an IRC channel which you've created. If there are no other people in, no big deal. Since you'll be the only person there and you'll see a little green light next to your Nick, which means you have Channel Operator status. This means you can change modes for the channel. You can run AmIRC again and log in as a real user so other people can in the channel.

Type something and the box at the bottom, my Player, and it will appear in the history next to your Nick. If there was anyone else in the channel, they'd see it too. Since you have operator status, you can use the buttons at the top of the screen to change modes. See the box.

### Major servers and channels

Unless otherwise stated, all servers use port 6667.

#### ANet #Amiga #Freech

<irc.anservers.org> <irc.ircbbs.net> <irc.ircbbs.org> The most popular Amiga City IRC network, so largely immune from takeovers and splits, has a very nice user database on their web site: <http://irc.ircbbs.org/ircdb.html>

#### ICNet #Amiga

<irc.ircnet.org> <irc.ircnet.com>

The largest IRC network, predominantly American, dominated by splits and channel take-overs. ICNet was considered a direct response to a failure of this network.

#### ICNet #Amiga #AmigaCafe #AmigaGear #AmigaGamer

<irc.ircnet.org> <irc.ircnet.com> <irc.ircnet.net>

The Euro side of the great ICNet split. Very big and busy, lots of servers, lots of hostile take-overs and splits though.

#### DanNet #Amirc

<irc.danirc.net> <irc.danirc.dan.net> <irc.danirc.dan.com> <irc.danirc.dan.org>

Started by users of the #Amiga channel, it has a small but very active core of Amiga enthusiasts. DanNet uses port 7000.

#### AmigaNet #Amiga #AmigaCafe #AmigaIRC

<irc.amiganet.org> <irc.amiganet.org> <irc.amiganet.org>

An easy alternative to ICNet, it's more stable and has a pretty good Amiga following. <http://irc.cheesecake.com> <http://irc.ircdb.org>

### Private chats

Type "QUERY <nick>" for a little window to privately chat between yourself and another person without others seeing "Amiga". You can send a file to someone by using "SEND <nick> <file>" and a file transfer appears.

In AmIRC you can't just talk with "TALK <nick>". That's good and useful by itself. AmIRC makes things a little easier by having "AMICO <nick>". This message people probably like hearing "Amico, because what you want to tell is a secret". The tab key can be used as a shortcut.

You can't send a file to someone, the DCC receiver will automatically download. There's much more, including the AmIRC documentation won't hurt especially when it comes to configuring AmIRC in depth. See you all later, AmIRC! 

### AmIRC's control panel explained

Topic protection. Only channel operator may change the topic. Normally enabled.

Secret mode. Channel does not appear in a channel list. Normally off.

Private. If enabled, visitors on a user on this channel will not reveal this channel.

Limit users. Number in box sets maximum number of users in channel. Normally off.

Channel messaging. Enables messaging channel messaging. Normally enabled.

Invite only. Can't join channel unless someone (user, invite <user>) Normally off.

Moderate. Only ops and people with voice may speak to the channel user for moderation. Normally off.

Keyword. If enabled, users must join with a keyword by using /join channel keyword. Normally off.

Banlist

Banlist GUI



## Net God speaks

There's a fresh trend appearing increasingly from Net software authors of late. That is to implement cutting edge features in order just to be the 'first'. I'm not entirely convinced of their apparent logic here. In reality no other user of another platform could care less if some Amiga program does 'X' for example, and their big application doesn't.

Of more pressing need for us are the basic features that we still have lacking. Javascript in web browsers is a classic example. None of the three big boys deems that this aspect is important despite the fact that it's the single greatest missing feature that stops us from using web pages just as they'd be used on Netbooks.

I'm not saying it's easy or that it's not abused on the Net but this has never been a valid argument for not having the feature in the first place. The same argument was thrashed out with frames when CU Online adopted their use.

I can think of a zillion really cool things Amiga users could do on their web sites with Javascript. Do we need HTML 4.0 to be the first?

Sorry authors should be addressing the areas of the biggest impact on what is we want to do, right here and right now.

# Surf's Up!

This month we discover a Worldwide weather monitoring service, a networkable free Civilization clone...



### Weather Experience 1.5 released

Weather Experience is a small Net client that allows monitoring of weather conditions throughout the world. It relies on the information available at a few over US based servers but, unsurprisingly, all of the best information is on American cities and regions. However, there is at least temperatures, general conditions and local time available for a host of cities around the world.

The client is extremely easy to set up to display your chosen locations and the specific fields you want to view. You can find Weather Experience 1.5 in the Online check-in this month's CU200 or download it from <http://www.rtsolutions.com/weather/>.

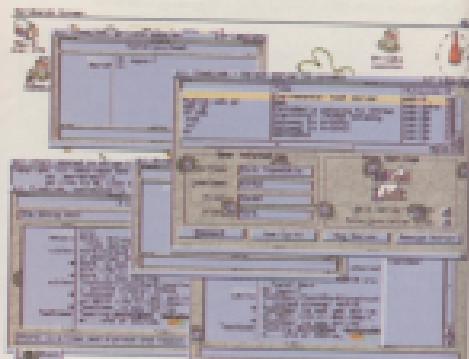
### Antiga needs HTML encryption, HOH

The main Amiga archive, at <http://www.amigaworld.org/~andreas/> and <http://www.amiga.org/> has been plagued by bugbears recently. The most recent reason given involves hard drives becoming a RAMO, very big hard drives almost filling up. The mirror and continue to work but of course they won't be updated until new archive until the main archive at least works once again.

We contacted Urban Modder, Amiga's representative to ask him what the story is. It seems 'volume1', the machine that the main Amiga site is hosted on, runs as two RAMO and is being upgraded to 1 RAMO. The question is, how much space is freed if Urban sets up the tested module archive and moves Amiga mod to there.

### New IRC client Minotaur

Believe it or not, some people still want MIRC as a disadvantage when running Net software. Those people have been a little out of touch with



IRC software since Grepwave's development fell into disuse some time ago. Reason is apparently lacking in the form of Minotaur, a new Cross-OS based IRC client.

Obvious comparison will be drawn against the Amiga's MUD-based brilliant IRC client, Amirc. Minotaur claims to address the many multi-window nature of Amirc, and it will be possible to identify individual windows.

There will be public beta version out as we event to press but check <http://www.potatohead.maths.soton.ac.uk/~minotaur/> based as there might be the time you need this.



# Surf of the Month

This month CU's Net man, Matt Bettinson, does the Web surfing thing. Like he doesn't anyway...

**H**ey! This is neat. I've never done a Surf of the Month before so let's start from the beginning. First off, we need to buy an Amiga. Sound good? Right, well let's move over to **Micromani**, the UK free-advert magazine which has lots and lots of cheap Amiga hardware for sale. Trying the **Hardware** for sale section, I found an A1200 68000 8MHz 12MB of RAM and 200A9 hard drive for £200.

Can't complain about that! I thought I'd put in an ad for a Mac II, maybe someone will buy it. Free ads go on the web site and the printed weekly which is a great way to offload some computer parts by cash. It really is a great

magazine with a great website to accompany it.

OK, now we've got an Amiga, let's get check out some modems to go with it of course. Good old **US Robotics** aren't limited to the US at all, ladies! There's a good USR site also which is good news since the modems are clearly specific. The best news is the 56K modems at the moment, of course 56K's not modems offer 56K if you buy a new one, or you might have a USR Sportster Flash modem. The latest code to make the modern 52100 compatible for the UK can be found there. Naturally this works with WinModem, the UK's only Amiga specific provider.

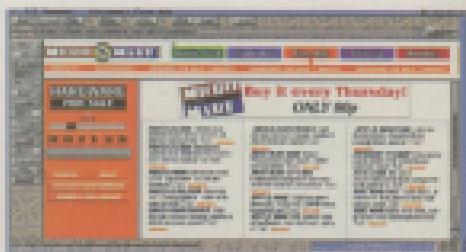
Modem buyers get us some high speed serial serial for the Fast new 10M modems. What better place to look than **HiSoft's** excellent web site? It's a bit of a graphic overload but some where on there is the stripped PCMCIA high speed serial port. Holy cow, we can now buy it online. This is pretty high-tech stuff and there's lots more products to check out too.



▲ The NetConnect support site has information and updates.



▲ HiSoft's graphics heavy web page allows you to buy from their range of products online.



▲ Buy It Every Thursday! ONLY £69

Get the excellent WinModem web browser and CD writer bundled.

What we need now is some nifty software to use on our kick butt Amiga Internet machines. For that, we'd best head over to the **NetConnect** home page. This is the support site for the Net software package called NetConnect. You may remember we covered bundled NetConnect Lite on the NetConnect/WinModem connection offer. At this page you can find out about these versions, buy the full version and get on the NetConnect mailing list. Happy joy!

Now that we're online and we have all the best hardware and software, we're supposed we need one of those 'special' sites. I've always fancied a picture of **Barack** (as from *Barack* by *Barack* (I'm *Barack*)). Actually my phone's named *Barack* (or *Barack* if you're up a site promising lots of

## Those sites in full

**HiSoft**  
<http://www.hisoft.com/10m.htm>  
**US Robotics** 56K  
<http://www.usrobotics.com>  
**HiSoft**  
<http://www.hisoft.com>  
**NetConnect**  
<http://www.hisoft.com/nc/nc.htm>  
**WinModem**  
<http://www.hisoft.com/nc/nc.htm>  
**Barack** (as for real)  
<http://www.hisoft.com/barack/barack.htm>

pictures of her and other celebrities. Interestingly it's a false and actually a plug for a UK comedy web site called 'Comedy U-Crap'.

It is a great place to discover by accident, and the ensuing laughter made me forget Mr Cox. Just as well really. ■  
 Matt Bettinson.



▲ HiSoft's UK web page has the sleek AOL upgrade to new Counter and Sportster for £1 each.



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PPU for 1230-M E 45

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with 68030, 25MHz E 559  
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with 68000, 50MHz E 699  
with 68040, 40MHz E 539  
with 68030, 25MHz E 499  
200MHz PPC 684e & SCSI-3  
with 68000, 50MHz E 999  
with 68040, 40MHz E 799  
with 68030, 25MHz E 699

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68030, 20MHz E 95  
SCSI Controller E 65  
PPU for 1230-M E 45

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with 68040, 40MHz E 479  
with 68030, 25MHz E 449  
No 88k Series CPU E 399

## Hard Drives (3.5") Bare SCSI-2 & ULTRA

1.2Gb SCSI-2	Quantum	E 199
2.1Gb SCSI-2	Seagate	E 209
3.2Gb SCSI-2	Quantum	E 309
4.1Gb SCSI-2	Monolithic	E 409
4.2Gb SCSI-2	Ima	E 529
4.3Gb SCSI-2	Monolithic	E 399
4.5Gb SCSI-2	Monolithic	E 559
5.1Gb SCSI-2	Ima	E 699
9.1Gb SCSI-2	Monolithic	E 1999

## Hard Drives (3.5") Bare E-IDE - For Amiga 4000

These drives are NOT suitable for Amiga 2000

1.2Gb E-IDE	E 145
1.6Gb E-IDE	E 165
2.1Gb E-IDE	E 170
2.5Gb E-IDE	E 185
3.1Gb E-IDE	E 210
4.0Gb E-IDE	E 260

## Hard Drives (2.5") Bare E-IDE - For Amiga 1200

1.0Gb E-IDE	E 165
1.4Gb E-IDE	E 185
2.1Gb E-IDE	E 260
Cable, S/W & Screws	E 9
Only when purchasing drive 2	

## CDROM Drives (Bare)

Internal Fitting - NOT for A1200

8x Speed SCSI-2	E 119
12x Speed SCSI-2	E 139
SCSI-2 CD Writers	E 299
8x Speed ATAPI/IDE	E 79
12x Speed ATAPI/IDE	E 89
16x Speed ATAPI/IDE	E 89

## Cartridge Drives (SCSI)

ZIP 100MB	Int. + Case & Form	E 129
ZIP 100MB	MEW format	E 129
ZIP Drives (x 2)	Int. + Form	E 79
JAZ 120	Int. + Case & Form	E 269
JAZ 130	internal 128 format	E 349
JAZ Drives (x 2)		E 249

## DAT Drives (SCSI-2)

2Gb HP	Internal + Fitting Kit	E 499
240Gb HP	Internal + Fitting Kit	E 949
476Gb HP	Internal + Fitting Kit	E 749

## Memory SIMMS

4Mb, 72 pin, 70ns	E 25
8Mb, 72 pin, 70ns	E 40
16Mb, 72 pin, 60ns	E 70
32Mb, 72 pin, 60ns	E 120

## Cartridges

LOLA 2000	Video & 486	E 249
LOLA 1500	Video Only	E 179
BLIZZARD	Video Only	
BLIZZARD	Video Only	
NEPTUNE	Amiga, Int. & External SCSI & Chroma Ray	E 629

## Fax / Modems

28.8K External	E 59
33.6K External	E 99
56.6K USB Sportster	E 219

## Networking

AMIGANET Ethernet	E 175
ARADIGITAL Ethernet	E 179
HYDRA 1200 Ethernet	E 149

## Monitors

14" Microvilt 1430S	E 239
17" Hi-Res SVGA	E 409
19" Hi-Res SVGA	E 199
14" Hi-Res SVGA	E 165

## Amiga Software

ART EFFECT 3	E 149
INTEGRATOR BROADCAST	E 169
AMIGA2K Backup SW	E 30
TRIVIA 2 Personal Database	E 55
MULTIMEDIA EXPRESS 1.0	E 49
TURBOCALD 0.5 Sheet	E 25
INFONODE 2 File Manager	E 15
VICKIWORTH 7/8	E 25
PERSONAL PRINT 0.4	E 19
CLARIS/PA Professional V3	E 179
ADOPAGE V2.0	E 109
DOCUMENT DESIGNER V3	E 239
DOCUMENT CREATIVE DD	E 69
ANIMATIC V1	E 99
ADOPAGE MAGIC Publisher	E 69
ADOPAGE MAGIC Cardline	E 99

## Miscellaneous H/W

PC14500 IV 24-Bit Graphics  
Card with Flicker Filter E 269

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# Sound Lab

## First steps with Project XG and OctaMED SoundStudio.

Moving onto using MIDI instruments from within OctaMED is easier than you might think...

**O**ctaMED SoundStudio is unique in the way it combines powerful Amiga sample based tracker features together with full MIDI sequencing. The MIDI side of things is quite often overlooked, but it is this which gives SoundStudio the ability to transcend the limitations of your internal audio hardware.

Unlike dedicated MIDI sequencers, SoundStudio gives Amiga control over Amiga samples as well as the ability to control an entire MIDI studio. If you've invested years in getting the best from purely sample-based trackers, opening up an extensive MIDI equipment will come as a breath of fresh air. In most situations, the best way to expand into

### MIDI commands

For easy reference, here's a list of the MIDI specific player commands available from SoundStudio. Many of the standard commands also work on MIDI instruments.

- 81 and 131 Set pitchbender (one signed hex)
- 84 Modulation wheel (000-0FF)
- 88 Set hold note
- 8A Polyphonic aftertouch
- 8C Set volume
- 8D Channel pressure
- 8E Pan control
- 90 Send MIDI message (message no. -1)
- 77 Set volume controller
- 9C Change MIDI preset
- 21-3F Set MIDI assigned MIDI controller

Please remember that the full SoundStudio manual is on this month's cover CD, so do check it out for further details.

the world of MIDI is with a multi-timbral sound module, one that offers a range of different sounds, preferably with built-in drum kits and effects to add reverb and other effects.

If you don't intend to go all the way and build a complete studio, our DIY Project XG from the September issue is just perfect. This offers all of the above and more, requires no MIDI interface, no mixer and even combines your Amiga's audio output with its own to give a single stereo signal that can be channelled straight into your PA.

Since OctaMED and SoundStudio allow you to enter notes from the Amiga's keyboard, you could also consider adding a MIDI module instead. This is a MIDI instrument with no keyboard of its own, which helps keep the price down.

### Your first instrument

Whether you take the Project XG route or get hold of a standard MIDI instrument, the basic concepts of integrating your new gear with SoundStudio are the same. Basic control of a MIDI instrument from SoundStudio is simple.

First turn on the MIDI features by selecting MIDI Active from the MIDI menu. Click on the Proj button from the Main Control panel. Next, enter a name for the instrument in the Name box, such as 'TOMS Test' for example. Now move the MIDI0 and Preset sliders to select which sound you want to assign to this instrument.



▲ Both Project XG and SoundStudio as SoundBots you've got an entire virtual studio like this at your disposal.

Then, and which MIDI channel you want it to use (it's best to give each instrument its own MIDI channel, but not essential).

Your MIDI instrument's manual should have a reference section for you to match actual sounds with Preset numbers. Project XG users should refer to the charts starting on page 32 of the DINXG manual. While we're at this stage, it's well worth remembering that most MIDI synths like to use MIDI channel 16 for drums, although this isn't always the case.

Now try playing a riff on the Amiga keyboard to see if it's all working. If it is, you'll hear your MIDI instrument playing the notes you pressed. You can now go and set up more MIDI sounds in the remaining instrument slots. Remember, you can use up to 64 tracks of MIDI data now!

### MIDI commands

Well that's the easy bit over with. The next thing is to take a look at the MIDI specific commands. These generally work like the standard player commands, but send MIDI data instead.

Many of the normal player commands will also work with MIDI instruments. By taking a look at the online help, to see which ones work with MIDI and which ones don't. In many cases, you'll find your MIDI instrument has features which aren't directly supported by the player commands.

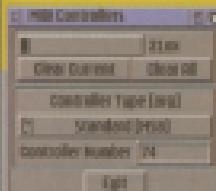
It's from where things can get a little bit on the sticky and technical side, but once you've got the hang of driving your own particular gear, you shouldn't go through the process too often. Take a good look at the User definable commands panel for a guide to customising your own commands. ■

Tony Morgan

## User definable commands

One of the most powerful and flexible MIDI features of SoundEdit is the ability to assign commands [1-16] to any MIDI controller number. This allows you to access parameters of your MIDI instrument that would otherwise be out of bounds, or at least require lots of mousing around.

It's actually simpler to use than it first appears. From the



MIDI menu, select Controller Commands. From here you can assign any MIDI controller number to the SoundEdit commands that range from 11 to 16. For example, the Project 8.0 sound card uses MIDI controller number 24 (decimal) for the filter cutoff (brightness) level that's used on specific instruments. To change the filter cutoff level, first you would assign a SoundEdit command to controller number 24 - controller number 24 seems logical, as that's the first of the assignable commands. In this case, you would enter 24 in the Controller Number box (this is a decimal figure, as opposed to hexadecimal).

Now you can go to the tracker editor, input a sequence of notes and alongside the notes, enter some 24 commands. For example,

this sequence would play a simple melody with a steadily opening filter on the lead sound:

Remember that SoundEdit also features additional command pages. This means that although that track now appears to be full of commands, you are still able move by hopping to a new command page.

To add more command pages to a specific block, choose Set Properties from the Block menu, then increase the End Page value. You can cycle through the various command pages of a block using the Shift-F8 keyboard combination.

Using this technique you can add reverb changes, vary the amount of reverb or other effects, or perform any other change on the sound that your MIDI instrument will allow.

Block 8/8 - C		
24	0	5
F-8	131100	
F-4	131103	
---	031111	
---	031119	
---	031127	
---	031129	
---	031131	
---	031138	
---	031141	
0-5	131142	
---	131153	
11	131153	
---	031159	
12	031167	
13	031177	
14	03117F	
15	031180	

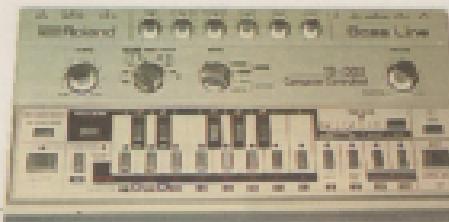
# TB 303 Emulator



**S**ee page 9 for a quick introduction to this month's cover-mounted TB 303 Emulator. With a guide to the knobs and buttons on the control panel, this issue is so packed that we're reserving the rest of the operating instructions here in Sound Lab... so if you're with the odd ones,

The simplest way to use this emulator is in single-note mode, in which you can adjust the controls, render a note and then save it out as a sample. Have a go, just hit the Render button straight away once you've recorded it up. You'll see a sequence of waveforms on the screen as the software simulates the synthesis circuits of the TB 303 to make a sample. To hear the sound, click the Play button. If you like it, use the Save button.

Now try making a different sound by turning the knobs. The Cut Off and Resonance controls make the most obvious difference to the sound, when the Cut Off turned to the left, only low frequencies will be allowed through the filter. Turn it the other way to open up the filter to higher frequencies. Resonance 'bounces' the sound, boosting the



▲ **The real thing.** Roland's TB-303 synth is such a delight. Here you're given all of your control

amount of activity in the frequency set by the Cut Off knob. If you were the Cut Off value is set at the lowest it can be, the sound is sustained, turn the Resonance knob right. The Decay knob sets the length of your note, while the Accent control doesn't do very much. The official 303 manual mostly says it controls the amount of accent on the sound from sustain. See what it does for you.

### Script mode

There's a tracker mode planned for future versions of the program, but for now, one way you can make sequences is with the use of the script functions. This sounds a bit

daft, and it is, but you can get the gist of it by looking at the example sample. To render a sequence from a script, click the Solo button and select one from the list in the requester. Once you click OK, the sample is rendered automatically. This takes longer than rendering single notes of course. Use the same Play button as before to hear it.

If you return to Workbench using Right-Arrow and left-click the script script into a text editor, you'll see it consists of a sequence of lines, each one representing a different note. The letters and numbers on each line specify the amount of resonance, cut off frequency and so

on for each note. After some of the values and remember to see what does what. Don't worry if it's like a lesson in programming. Future revisions should make the sequencing process a lot easier.

### Slide Charlie Brown

Another of the 303's characteristics is its ability to slide from one note to another. You can do this too using the Slide controls. The Level knob sets the pitch range of the slide, while the Up/Down switch selects the direction of the slide (although upward slides do tend to come out a little bit on the strange side). ■

Tony Morgan

### Want more info?

You can download some of the original Roland TB-303 SoundEdit user manual from a link at [www.roland.co.uk/303.htm](http://www.roland.co.uk/303.htm). This is an *unofficial* 303 homepage with lots of info on the other bits. If you have any comments or suggestions you want to make to the author, Jason Scholten, you'll find his address in the Feedback file. Thanks Jason!





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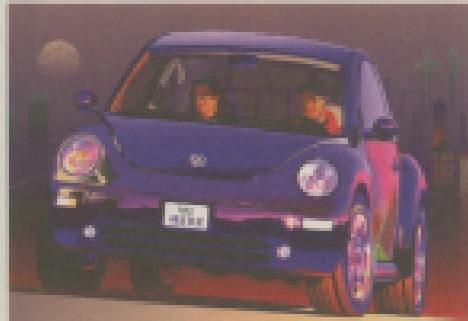
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# Next Month



#### **Background & P**

You, we told you we'd have it a couple of issues ago, but apparently it was held up at the last minute. Anyway, we've got it now, but it arrived too late for review in this issue. We can tell you it's looking like it could be the hottest 3D rendering package the *Archie* has ever seen, but you'll have to wait until the next issue of *CG Arches* for the full story...

Championship Manager 3

No really! We're not pulling your leg. The elusive football management game is being duplicated and put into shiny boxes, ready to be poised temptingly on a high street shelf near you. It's about time we had a decent, up-to-date footy manager game, but we won't be pulling any punches in our in-depth review.



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# Q&A

## Logos

Mysteries and meanings ...



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## Printer problems



Please can you help me with my Citizen ABC printer? Whenever I try to print anything the characters 4.7/PW/PW/PW are printed and the paper is spattered. I have tried several ways of curing this problem, e.g. different drivers, different parallel cable, print manager programs, and even a different power.

Sometimes during these attempts the printer suddenly works fine and keeps on working for the rest of the session, but the next time I use the printer the problem returns, even after trying the cure that appeared to work. I have even tried the `Stall` command many >PAK, but the characters typed on the keyboard do not appear correctly on the printout. I would be grateful if you could solve this problem.

Alan Pilk, Bristol

As you say you have changed the cables, printer and software with no effect, the logical conclusion would be that your computer is at fault. The symptoms that you describe could well be a single parallel port, but one thing makes me a little suspicious.

The fact that what it starts working it stays working until the end of the session indicates that this may well be a setup issue after all. The using of characters is a characteristic of a printer having sent foreign control codes. One possible explanation is that when it starts working you are getting something right by trial and error and not seeing it. Make sure next time it starts working you save all your printer profile!

A lot of a shot in the dark this, but we do believe that the Citizen ABC has a miniature DIP switch setting inside which allows you to select between IBM Proprinter and Space control codes. Make sure that your printer driver and your

No matter what the level of your technical problems, if you put them to our experts they'll try their best to fathom things out. Also, please remember to provide us with as many details on your systems and problems as possible, to help us in helping you.

DIP switch settings tally up.

## Stalled installer



After successfully building a tower system following your excellent "Build Your Own Tower" article in the April issue of CD Amiga, I used XPAF Plug 'n Play to get my CD-ROM working. After selecting I want to install and got the message "unable to open the tool installer".

I have to replace the CD chip or order a new set of Workbench disks as I believe mine to be corrupt? Please advise. I desperately want to use my CD-ROM drive.

Michael Ward, Wiltshire

Unless you have some other reason for thinking that your Workbench disks might be corrupt, as you are OK, I would use the `format` command to reformat your Workbench disks immediately. Go on, do it right now.

As to your query, it sounds like you simply do not have a copy of

installer - or possibly have a very old one - in your C: directory. Grab one from a recent CU cover disk and copy it into C: and all should be OK!

## Hardware hacks



I have an A1300 with an 80MB hard drive, 4MB memory expansion and a 120MB CD-ROM drive, and I am currently modifying my Amiga's housing to suit my needs. I am using an AM60 power supply and moving the motherboard into another unit but no do this I need to use another keyboard. I have an A2000 keyboard with a 9 pin DIN plug at the end. Could you tell me if it's possible to adapt it to my A1300 and if so how, what parts I would need, and where I can get them from?

2. Could you tell me if it is possible to wire up an internal A2000 floppy disk drive as an external one for my A1300. If so can you show me a wiring diagram?

E. Robinson, Hull

1. When you say you are adapting the motherboard into another unit, I guess you are talking about a tower case, as you really ought to look at the DIY tower article we ran in the April, May and June issues. For the keyboard Q question, use this month's Tech Tip on page 99.

2. It's possible, but you'll have to construct a custom designed 29 pin D-type to 34-way IDE plus power connector, which requires lots of fiddly cutting and soldering. You'll also then have to find a case and figure out some type of blanking plate, plus some way of hold-



ing the eject button in place.

I think you'll save yourself a day's work by buying an external drive, and it will probably cost about as much as the DIY version.

### The boot don't fit

I have an Amiga 1200 with a hard drive and a SCSI upgrade. Up until now it has always booted with the Workbench screen, but now it only boots with the DOS screen. Can you tell me how to get the Workbench screen to boot instead of the DOS screen?

I Hall, Exeter

**What's happened is that your computer is no longer running the entirety of its startup sequence file. This is a text file found in the `!`` directory of your hard drive which gives the computer a list of commands to do every time it boots up. Just about the last thing that is likely to be in your startup sequence are the lines:**

`loadfs  
load1`

These lines, logically enough, load Workbench, and then end the Amiga (DOS) shell that you get on boot up. If you type these lines in when you boot up into SCSI, you should find that Workbench will appear.

Two things may have gone wrong with your startup sequence. Firstly, it might have been deleted, or secondly it might have failed on some piece of software which you have recently deleted and it's getting stuck at that point. If this is the case, an error message will appear on the DOS screen. Either situation can be rectified by replacing your startup sequence with the original one from your Workbench floppy. Boot up to that bootable DOS prompt, stick the Workbench disk in and type `copy -d11 startup-sequence` to your screen.

Of course if you have customized your startup sequence in any way you will lose the customizations. You could try editing your startup sequence and removing the line which any error messages appear at least.

### Where's the cards?

Referring to your recent article on Zorro slots and sound cards.

I flushed out and bought a Zorro box board and then went on to phone Macromedia and Absoft

Computer Technics. God knows what my phone bill will be like! So, Macromedia no longer make the Recore sound card. In fact, they have stopped support for the Amiga completely. Absoft Computer Technics can sell me the ProBasic, but it will not work with OctaBlitz, as it is apparently a 'boxed' product. I have also had a highly offensive letter from PFB Software about their opinion of Amiga users, so no help there. So, there is no A40 drive for it. I would consider Petzold's DrDOS, if it is my last option, but it cannot find the phone number.

So CU Amiga, please help me. I have a Zorro160 design, and I DO want more than burning a hole in my pocket. Can you suggest any options? Can you give me a contact for any sound card manufacturers? If all the fails are there any trackers which will work with the 'boxed' OctaBlitz fails? Please help me. I am desperate to fit one of my Zorro slots with a sound card, any sound card. Macromedia suggested trying the second hand market for a Recore, but wouldn't that be just as difficult?

Justin Faig, Hove

**We reviewed DrDOS in the November 1991 issue of CU Amiga, so dig that out if you need major info on it. For now, here are the contact details for its suppliers:** Petzold, Fax: +44 (0) 542 5047 or +44 (0) 81 481 8222; E-mail: [petzold@iinet.net.au](mailto:petzold@iinet.net.au). They don't list a phone number. If you are still after a Recore you could try White Knight Technology on +44 (0) 800 822 321. Recore was reviewed in the April '91 issue of CU Amiga. 'Working down a second hand' Recore could prove difficult as they were never promoted to any great degree in the UK but it's well worth looking. The third option is to locate a MaxxPro Pro card, which also comes from Macromedia.

### Zip Vs CD-ROM

I need some advice regarding storage. Up until recently I was fairly **Macintosh** and on purchasing an 8mm CD-ROM drive as the next peripheral for my Amiga, but then I started to consider the possibility of adding a bypass Zip drive instead.

I'm trying to use CD-ROMs such as your CDUs with my Amiga without having to impress other people's CD-ROM drives, and

### No more fuzzy samples

**The most common audio-related query we get in about poor sampling results. For one reason or another, people are however being frustrated by samples that are poorly recorded: muffled, noisy, grainy, distorted, too quiet, or too loud.**

Sampling using an 8-bit system is less than satisfactory conditions is considered a bit of a misnomer to say the least, with trade-offs from electrical interference, bad sources, poor connections, sample rate mismatch and the like, all conspiring to muck up your sounds into one big fuzzy mess.

However, now that CD-ROM drives are cheap and readily available, you can all but manage

your sampler to the scrap heap, instead taking poor sounds from CDs in a most direct digital-to-digital transfer.

There's no need to buy special CD-ROMs with sounds already sampled in WAVE or MP3 formats. You can simply take any audio CD, and with the right CD-ROM drives and software, you can extract audio straight off of the CDs for use in your personal creations.

The Amiga Plug 'n' Play software comes with a tool called TR32Download. TR32Download won't work with all CD-ROM drives, but it's freely available from our cover CDs, AmigaNet and public domain suppliers, so it won't cost you anything to check if your drive is compatible.

To buy a Zip drive these days, the prices have dropped in price quite dramatically - we've seen them under £40 - and it's almost too cheap to sell.

You can run Zip and Request units with PCs or Amigas. You'll have to format the disks in PC format and mount them on your Amiga using CrossDOS and an appropriate mountunit. Amiga is full of PC mountunits and general help in mounting Zip disks for cross platform use. Request may be more work tracking down, but should also produce few problems.

With a CrossDOS mounted you can happily use the same disk in your Amiga and your PC - which is excellent, as you suggest, for Amiga downloads.

As far as to get, then offer very different things. Downloading the contents of an Amiga CD

would take a



• Zip drives are great, but as an 8mm CD-ROM, which should cost you just £15 for Zip, or £25-£30 for a Zip drive.



you can get yourself a hard drive. Microsoft do internal and external ones, which makes life a lot easier. If you transfer a lot of files across platforms, Microsoft (01998 261466) distributes them in the UK.

The hard Pascal option in Highspeed Pascal from Oregon Research, Call Hatch (0800 323 666) to order a copy. This claims to be totally Turbo Pascal 5.5 compatible, and C64 Internet, mail list subscriber Thomas Davies of the department of Physics and Astronomy, University of Oklahoma said that it was fine for almost all his class projects when he did a 4 year Masters in computer science.

Pascal is an old language mainly popular in academic circles. It has strong logic and strong handling facilities and requires a tight discipline which is why it's a good language to train computer students in. Thomas Davies said he offers further advice by Email on [powers@maths.ox.ac.uk](mailto:powers@maths.ox.ac.uk).

2. Yes, you do need a MIDI interface, but that's all you. You also need a MIDI instrument to plug into the MIDI interface. Macintosh will play Amiga samples in addition to MIDI instruments, but when you convert a MIDI file to a Macintosh file, it will want to play the various parts on a MIDI instrument. The conventional way to do this is to get a MIDI interface and preferably a General MIDI instrument. This will have all the sounds you need for most music, including drums and percussion.

Alternatively, if you don't need a lot of additional, why not go ahead with Project X2, our DIY sound card project from the September issue. That will do the job for far less cash and you won't even need a MIDI interface.

3. Tricky to say without more information. Power supply problems are our favourite culprits. Overclocked power supplies cause lots of crashes.

Although your hard drives shouldn't cause crashes, or if your PSU is a bit old, this is a very likely fault. Unplug any extra peripherals and see if the problem goes away. If it does, you'll need a new PSU.

Modern people with self-aware powerful PCs, but PC power cases come with big noisy PSUs and can be converted quite easily to power an Amiga. See our May issue's 'PC Tower' article for details and ring numbers like 023 (01474 5316000) for parts.

## A to Z



**Kissing goodbye to FAQ, we introduce the first part of a new A-Z guide to Amiga jargon, brought to you by John Kennedy.**

### A is for...

#### **A2000**

The first affordable Amiga, it followed on from the A1000 and was launched in 1991. Came with integral keyboard, a 60000 processor, 512K RAM and 512K ROM. There was no socket expansion for adding extra memory, and a slot on the side for hard drives, extra memory, video capture cards etc.

#### **A3000**

Launched as an improvement to the A2000, instead of the little brother of the A1200. Many A3000 owners upgraded thinking they were getting a better machine, and instead found their expansion plans very limited. One good thing is that an integral SCSI hard drive interface.

#### **A3000R**

The first Amiga computer, launched in 1994. Separate keyboard, 60000 processor and 256K of RAM. Graphics, sound and multitasking graphical operating system put it way ahead of the competition.

#### **A3000T**

Most popular Amiga, an all-in-one unit featuring AGA chipset and a 60000 processor, 2M of memory as standard, and Workbench 2. Tracker makes expansion easy, and internal SCSI interface and PCMCIA slot for other goodness.

#### **A3000X**

Cut down version of the A3000 for UK market only, with two floppy drives instead of a harddrive.

#### **A4000**

Similar to A3000, but in log box with separate keyboard. Has had Zorro expansion slots, as well as PC style ISA slots for use with a soundcard. A 60000 processor and 512K RAM as standard, but memory and hard drive expansion is possible.

#### **A2000+**

US only version of A2000, with an accelerator card as standard.

#### **A2000X**

Big box Amiga, launched in 1993, with 60000 as standard. Built in SCSI interface, Video RAM and release of Workbench 2. Excellent machine, only the high price and the continued success of the PC prevented world domination.

#### **A4000+**

First Amiga with AGA chipset, the

A4000 was available in 640 and 1024 revisions. Big box style, with Zorro slots and easy memory expansion with on-board 60000 sockets. Hard drive and at least 8M of memory as standard. Processor on daughterboard. However, this was not the machine originally designed to be the flagship Amiga and suffered from many design flaws.

#### **Accelerator**

Any card which speeds up a computer. Although memory alone sometimes does this, notably an accelerator features a faster processor than normally installed in the host computer.

#### **Address**

An AmigaOS command which allocates memory to be used as a cache or buffer to make address to disk drives faster.

#### **ACIA**

The major overhaul of the Amiga's custom chips lead to the A3000, offering 16 million colours instead of 4096. Built into A1200, A3000 and C3000. A much welcomed improvement.

#### **Agnes**

Custom Amiga chip used in non-AGA Amiga computers to control the display, the timer and DMA. Revised into Fat and Faster versions dealing with more memory.

#### **Alert**

A warning message, displayed by either the operating system or application memory is low, or a program has crashed on an application. Inspiring a memory about being unable to save a file for example.

#### **Amiga**

The best home computer.

Launched in the 1980s, still going strong today.

#### **Amiga-EV04**

The Disk Operating System which is used by the Amiga to store and retrieve information.

#### **Amiga keys**

The two keys on either side of the space bar. Used as an extra set of Shift or Ctrl keys to provide extra functions. For example, using the Right Amiga key and F1 will make the current screen for the one behind, making it quick and easy to switch between applications.

#### **Amiga**

A file format, part of the IFP family,

used to store animations. An animation consists of a series of separate images, when displayed in order they give the impression of movement. There are variations of AMIGA files, including AMIGA and AMIGA1. There are advantages and disadvantages to each, and AMIGA is the most basic and therefore most widely supported.

#### **Amiga**

A programming language included as part of the Amiga operating system distribution. Not only is it possible to write programs using Amiga, but as a macro it can also be used to enhance the facilities of other Amiga programs. Amiga can also be used to combine the features of separate programs.

#### **AMIGA**

A library designed to provide standard file requests for application programs. Makes it easier for the programmer to provide a more reliable way of obtaining filenames (for example) and gives the user a consistent interface.

#### **Amiga**

An AmigaOS command which creates a new logical device equivalent to an existing physical or logical device. For example, if ADIGRA floppy: c0:0, then any mention of floppy: now refers to the floppy disk drive, etc.

#### **AmigaOS**

Every file has attributes, and these define if the file can be read, deleted or written to. These 'bits' are set or reset using the AmigaOS command Protect.

#### **Amiga**

The Amiga has four sound channels, each of which can replay 8-bit audio samples. The sound output is available at the back of every Amiga model via two phone-style sockets. The sound needs to be amplified before it can be heard, either with battery-powered speakers or a hi-fi. The audio is also compressed into the RF signal from the modulator on various Amigas, which allows the sound to be heard through a TV set.

#### **Amiga**

An AmigaOS command which returns the amount of memory currently in use, and the amount of memory currently free.



# Backchat

**Make yourself heard. Send your views and opinions to Backchat, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ, UK. Or E-mail to [backchat@cu-amiga.co.uk](mailto:backchat@cu-amiga.co.uk).**

## Tongue-twisted

Can you tell me, please, how Peter Tytuskauskas's last name is pronounced? It's difficult to discuss the worthy gentleman when you don't even know how to say it. And it's hardly right to just call him Peter, is it? He's been something of a hero to the Amiga over the past year or two, so he deserves a little respect, doesn't he? (Understating it is, to admit, I just can't make headway with all those consonants in the middle. Please help.)

Allen D Burrell, Canada

We've settled on the following: "Peter Tish-tshang-hus" and he hasn't objected to it so far.

## Tower treat

Hi, it's me again. But now I'm the proud owner of an Amiga 1200 tower. Putting it in a tower was the best present I could ever give my Amiga. It's opened up a whole new world of expansions and add-ons: cheap CD drives, CD-ROM drives, hard drives... The list just goes on and on.

Not only have I given my Amiga a better place to live, it also has a new keyboard, CD-ROM drive and a 200 watt power supply. It's amazing what you can achieve by replacing a 23-watt power unit with one ten times the power isn't it? The best thing is when you get your friends round, put them in a room with your Amiga, and watch them drool all over!

The only thing it doesn't have is an Amiga badge. Is there any chance you can give me one of those nice stickers which were on your towers? Please, please, please...

Jamie Bannister, W Yorks.

Not sure if we've got any of those stickers left... we'll see what we can do.

## An elite force

Why don't big name developers play with Amiga? They'll make enough money on other computers, and computers to produce games on Amiga, even if they don't sell. So it's ClickBOOM who are left to do it, with their whole lot. I hope those games will make it to Amiga.

I try and help my friends and others around my area of Birmingham to continue buying an Amiga, being as they are cheaper than PCs and

you can do lots more than just play games on them.

The Amiga users are an elite group of people. It just makes no sense to buy an Amiga even if it is second-hand. I see second-hand A1200s for sale with a monitor, printer, keyboard, hard drive, CD-ROM drive, expansion and 100s of games for just £200-£300.

Are the people selling them mad? No, it's just not the top thing to have Amiga users. What I say to people like that is a\*\*\*\*\* to you, if you're not smart enough to stay with the Amiga then there will be someone else who will buy you off. Either I say to everyone to buy an Amiga, or keep your Amiga. If you are thinking of getting it, DON'T!

The Amiga is the perfect computer. Computers can only play games and PCs need upgrading every three months, so buy an Amiga and join the elite.

Baron Marley, Birmingham.

White we totally agree with your sentiments, you must be realistic about game publishers returning to the Amiga as a major format. The argument that they will make money from other platforms, as they will be able to afford losing money on Amiga games is based on pure fantasy.

Companies must make money in order to exist. No company in its right mind would deliberately profit from games at a loss. The Amiga scene is not a charity.

We must face the fact that there are far fewer Amiga users now than there were five years ago. The Amiga is no longer the first choice of gaming platform for most people. Presuming everything is big as it was then will get us nowhere.

That's not to say it's impossible to develop and sell Amiga games whilst still making a profit. It's just a bit more of a specialist job these days. The big names will only return when two things happen:

1. the Amiga hardware advances far enough to compete with current PCs and consoles, and...

2. its user base grows to give them a large enough market to which to sell their games.

## Shelling out

Your feature 'Power Gaming' in the August edition of CU Amiga was great! For me it seems like the Amiga market has turned - more and more developers are making more and more games and utilities, and only one problem remains: people don't buy them!

I recently read that the extremely promising looking strategy game Foundation will only need to sell about 4,000 copies for the publisher and the author to both make a healthy profit, which I think shouldn't be too much of a problem for such a stunning looking game even in the Amiga market. However, some games require a team to work on them and a single programmer with a few people helping him/her isn't enough. Real and CD-quality audio is becoming more and more important, as it is standard on other platforms. The Amiga needs to follow suit, but it's not that cheap to do.

Good writers and musicians need a lot of money to hire. So does all the equipment needed. Some game authors only have access to a plain A1200, or maybe even an A500 and need more if they are to develop 'big' games that require CD-ROMs or even PowerPC in order to run smoothly. So what can we do about this?

Well, we can try and get games. Very few people do so today. Or, I understand that games are expensive, and that they are not always as good as they look on the ads. So what? Most of all, Amiga games are a lot cheaper than on other platforms, but most users of other platforms buy a lot more games than Amiga does. And it is better buying one game each year than none at all, which some people do even though they



▲ Amiga hero Peter Tytuskauskas splits it out - his name, that is.

get something that comes out? And about the advertisements... Had the revenue increased?

"You'll recall a while magazine for this, but it is worth buying at least one more issue. Although I do not always agree with CDU Amiga's opinions, the reviews are generally well written and if a title is given more than 80% you can be quite sure it really is a brilliant game. Amiga games no longer sell 10,000 copies, 2000-3000 is more realistic for an average non-Amiga game, but maybe we can make those numbers rise at least a bit!"

"We can make a difference, together. Don't pay £1 carried all anything stored, because you can. Your local Amiga dealer probably sells 10-20 copies of an average non-Amiga game, so you can imagine how much difference only a few sales can make to whether they'll expand their Amiga offering or replace all the games they've got (Playstation or Gamecube games). Convince all of your friends to purchase a few games as well. Please!"

"There are people working there now off to get the Amiga back on track because they love using the machine and want it to succeed, but they need to involve themselves as well. When they release their masterpiece that they have worked on for many years they often find out that they only earn a paltry amount of money - maybe about £2000-3000 each if they are a team and have a few selling titles. And now..."

"P.S. Upgrade as well, if you can afford it, but buying software might be even more important."

Ivan Sandrik Unstated via E-mail.

## Starting in C

Congratulations to the Disc CD Give-away winner! I've just trawled through C in a few

games I'm just starting to get into, and I'm sure the tutorial will be of great benefit to me, once I get a little more knowledge of the more fundamental and machine-independent aspects of C. Hopefully, this will be soon, as a friend of mine is writing a series of e-mail tutorials which cover everything about programming in C, right from the start.

This is my one criticism of your tutorial... in it, you recommend for the beginners a 'good book' on C. Surely a tutorial accompanying the very basic elements of C would have been beneficial before running the current tutorial. Even one that runs alongside would, I feel, be an advantage. After all, I'm sure the number of C-based programmers is small in proportion to the complete C novices reading the magazine, the majority of whom would prefer a monthly beginners tutorial in the language rather than having to purchase a book. How about it?

Chris Ellsworth via E-mail.

The idea of our C tutorials is to get results fast enough to make the whole thing appealing. If we spend the first six months performing assembly instead making functions or meaningless numbers, is anyone really going to be interested in taking up C programming? That was why we decided to let the books deal with that side of things.

## True performance?

At last the Amiga seems to be finally heading somewhere. With various development projects underway it all looks increasingly promising for the Amiga's future, especially with the advent of PowerPC processors into the Amiga World. Using the PowerPC board in operation at the phase B and CD Amiga stand at the 'World of Amiga' show (well worth the visit) I was certainly impressed. However, I'm not convinced that they will perform how people might think.

The only I see it the PowerPC processor and the 68000 processor both share the same data bus, which could mean a significant slow down from the start, because cache would be wasted when switching between the two processors, causing a significant performance hit.

This is perhaps the best way possible to integrate two processors of different types on hardware and an OS that was never designed to achieve such a co-existence, but I just don't see how it can result any where near the performance of a

# PowerPC™

series purely designed with a PowerPC processor in mind. Any PowerPC native application that called an operating system function would mean it had to switch to the 68000 processor then back to the PowerPC processor. The same goes for any interrupts that are required.

Surely we will see quite good performance from a PowerPC board if it isn't working alongside a graphics card? Are PowerPC boards really the performance we expect or are they just hype?

Ian Chapman via E-mail.

For anyone who missed out 'PowerPC is Coming' feature in the August '97 issue, as we explained then, the PowerPC and 68000 CPUs will not be able to work simultaneously. Therefore for total integration with your existing Amiga

systems, a PowerUp card will need a PowerPC version of the Amiga's operating system. 68000 code can then be simulated by the PowerPC. At the moment, writing PowerPC code requires the use of the 68000-based Amiga operating system itself. With any luck we should see a PowerPC version of the Amiga's operating system by the end of this year.

## State-of-the-art

Hi. I don't know whether you know it or not, but many American Amiga users read your magazine here.

Personally, I haven't bought an issue since 1993 and I am filled with the fact that I am able to purchase it at a local bookshop.

I've been wanting to compliment your magazine for some time now. So I've taken the time to write this E-mail now that I've upgraded from my

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as added to my new Amiga 2000.

CU Amiga magazine is truly excellent. Your articles and features have been a service to not only the European Amiga scene, but to the global Amiga market as well. Even though we have one last Amiga Amiga magazine here, I refuse to spend £8 on a magazine the size of an informative pamphlet. Now that we are able to purchase the CD version of your magazine there is even more to look forward to.

Please keep up the great work and get rid of the happy disk version. All Amiga users should have a CD-ROM by now.

Christopher Ayres, Pennsylvania.

Good to hear you like it. We've adjusted our international distribution in favour of CD issues now. However, we still sell a significant amount of disk issues in the UK. While we'd like and strongly encourage readers to get CD equipped, we are providing a service for Amiga users, rather than dictating to them what systems they should have.

## Control freak

After all the problems over the last few years, it's nice to see something good happening to the Amiga. After Compaq 2000 buying them and phase it bringing out the PowerPC cards things are looking up. However after reading about the possible new types of games (Mystique, Iceman etc) I feel one point has been overlooked: the game pad. How could you even begin to control Mystique with a trackball (esp. if it even had help from the keyboard) it would be pretty much impossible.

I think it's about time we looked for a new standard, and ditched the old trackball thing, after all it's

► **Amiga 2000 controller - a thing of the past.**

been with us since the PCs, circa 1980. What I would like is something along the Nintendo line, with analog and digital controls.

Andy via E-mail.

## Pukka presentation

I am just writing to you, on behalf of myself and my friend Steve Murray, to tell you about a presentation that we made as part of our University course-work.

Steve and I have been Amiga fans for ages (Steve got his Amiga almost as soon as they were available) and we now both own AT2000s, with various expansions. Because of our liking for the Amiga, Steve suggested that, rather than use Microsoft PowerPoint to produce black and white slides to photocopy onto slides, that we used the Amiga. In the same set of presentations was a PC, running PowerPoint and using the same LCD projector. Can you guess which group had the better results?

While the PC versions were in a higher resolution – partly because it used the VGA connector to the projector, whilst the Amiga was connected to the Composite connector – even small animations on the PC, about 40mm by 40mm on a 14" screen were quite on the PC, while Amigas were scrolling text and graphics around the screen and using smooth 'faded' effects between each slide. Our presentation was also aided by graphics produced in Easysoft 2 (from one of your newsletters) which were cut and pasted into Final, via Clipart.

The only downside to the presentation was, when it was all over, people came to us in lines and asked us how we got 'Presentation' to do that. It gave us a buzz to point to the AT2000 on the desk. This shows in proof that the Amiga is still useful in some fields. The Amiga does not live again – probably because it never died in the first place.

Anastasios Charalambous and Steven Murray, Loughborough.

## Lyotra lauds

Thank you very, very much (and times) that by衷於 getting TFS and placing it on CD. I am a subscriber to your brilliant mag and I cannot wait for it to be published through the Internet. My subscription is due

for renewal very soon, and by doing things like this, and in general creating a well balanced mag and producing what I think is the best of the best CDs, there is no doubt in my mind that I will be subscribing very soon again!

Keep it up. Thanks yet again, and thanks for making 113% with the Amiga. All credit to you.

Stephen Threlfall via E-mail.

Good man! Taking out a subscription to CU Amiga is a sound move. Not only do you get it before it hits the shops, you also get the chance to take up one of our excellent offer. At the moment we are offering 12 issues for the price of £10. Check page 103 for full details.

## Stuck on CU...

Good grief, your magazine is amazing. I mean how do you make every issue so perfect? Your CDs are far by the best, your content is the best, your look is the best, your web page actually works... everything, even the glue you stick the CDs on with is the best. You can play with it for hours sticking it to things, ping-pong it all over the table, you can even stretch it to varying degrees and ping it with your chin and you have a brilliant musical instrument. Hurrah!

Mark Bellens via E-mail.

Believe it or not this is actually a real letter. Thanks Mark. We do try our best.

## Turbo is tops!

I just had to write and thank you for putting TurboPrint 3.0 on your CD.

I've had my AT2000 over four years and thought I was getting the best possible printouts using the Canon 1000. I've invested and upgraded the software over the years but was unhappy at the unacceptable 'banding' on the higher quality printouts. I read TFS' review out of curiosity with the hope of improving my printouts. What a misconception! The printouts were so good, I didn't hesitate to buy the same printer. I sent off for the cheap upgrade to the full version the same day!

I am so impressed with the software, it shows that the Amiga is perfectly capable of producing quality printouts.

Howard Bellens via E-mail.

# To the Point...

## E-mail pen pals

I notice that you get lots of letters from people all over the world. Can you do a list off E-mail pen pals page for those interested? Thanks. Keep up the good work.

Graciano Makaray, Kingswood.

That's not a bad idea. Did you know you can an Internet mailing list for CU Amiga readers? You can subscribe to it (for free of course) directly from our web site [www.cuamiga.co.uk](http://www.cuamiga.co.uk).

## Karmy features

Well done to Andrew Karmy for an excellent Power Gaming article. It is just about the first time I have heard someone be honest about the current situation.

M. Simpson, Ipswich.

## D.I.Why?

I think the new DFI series is a crap idea. I am only 18 years old and don't have much access to soldering irons and heatguns. I'm sure there are plenty of adults out there who don't like fiddling about with resistors and 100+ volt power-supplies. You should have articles on avoiding drills and pliers and how to assemble things as simply and uncomplicated as possible.

Brian Parfitt, Belfast.

The DFI project so far have been fairly complex, but the next one will be a lot simpler. There should even be an article on getting involved in the project.

## South Sense sadness

I was very annoyed at September 1997 issue because of South Sense investigations. I don't own a CD drive.

Dominic Mooney-Murphy (age 18), Belfast.

You know the answer to this one, don't you? We made it clear that South Sense investigations was too big to fit on the page. Sorry! CU Amiga Magazine reserves the right to amend or edit letters submitted for publication.





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# Points of View

Our Technical Editor writes an open letter to Jeff Schindler, the General Manager of Amiga International.

## A short term solution to save the Amiga



### By Matt Bertelsen

Dear Jeff,

Every Amiga enthusiast has ideas on what Gateway and Amiga International can do to save the Amiga. Here I'm making the greatest recurring theme of Amiga enthusiasts' suggestions.

### State of disrepair

The 'stock' Amiga hardware and software scene is in a pretty bad state of disrepair. Most Amiga enthusiasts are running in impressive arms of third party hardware and software which shores up the gaps. It takes time and resources to create a 'kick-ass' Amiga, so how about Amiga International providing us with one as standard?

As it will take a long time to clean up the Amiga, the short term plan, as we know it, is to license third party Amiga developers such as MicroPC and Index Computers, letting them create officially backed Amiga competitor hardware like it should be. There's little chance that a significant OS upgrade, even when it does come, will catch up with current developments.

The third party add-ons in use by Amiga enthusiasts today were written by many individuals, experts in their field, over the

course of years. This enormous scope has kept the Amiga alive.

I propose that to get the Amiga off to a running start, Amiga International take the current state of a 'kick ass' Amiga and snapshot it into officialdom. How this will actually work is that Amiga International will provide official releases that MicroPC, Index and One Man Amiga Construction Limited can install onto hard drives as standard on all new machines. This software turns the Amiga from a good machine into a mostly fantastic machine, costing practically nothing extra to boot.

We're talking about Workbench 3.1 and a cooler icon/resource scheme, some vital utilities and a TCP/IP Internet setup. It's easy to start writing on what we may personally think should be bundled as standard but considering commercial reality and the chosen direction of the PRO department will obviously need to be taken into account.

The software, whether it's the full version, and ultimately what packages are acceptable needs to be decided by a body officially in charge of creating the prepended. The whole lot can then be released

"I propose that to get the Amiga off to a running start, Amiga International take the current state of a 'kick ass' Amiga and snapshot it into officialdom".

as AmigaOS Plus' or something.

How nice someone sees what is being called AmigaOS, will actually look like a modern computer. It won't look like the horrible four colour grey and white nonsense that's the stock Workbench 3.1 - still being shipped with Amiga today.

### Radical driver & RTG

More radically driver and RTG subsystems such as CyberGraphX and AHI could be supplied. It will have a major impact if all future software that supports the enhanced features. Software will have no choice but to take advantage of the hardware which licensed hardware providers must build in.

Controversially, I also believe Major User Interface provided as standard can do nothing but take the Amiga forward, despite my own prejudices. There is nothing on any other platform to match the graphical power and ease of use for the

user and programmer as MUI. If it's official, the Amiga will have the best GUI system in the world, full stop.

Imagine that new Amiga owners start here, and don't have to discover what to obtain to get a kick-ass Amiga. This is good and recognises those who've maintained the Amiga as a viable application for Gateway 2000. Later on the third party software can be incorporated into the OS: projects such as (bullet) Internet software, proper integrated graphics and audio RTG systems and so on. They can even retain API compatibility with CyberGraphX and AHI. All due respect to AIA's PCD, but they started yesterday where the authors of those subsystems worked upon their implementation. It's now time to recognise their efforts.

### Tangible results

I believe Amiga International need to hire a panel of Amiga enthusiasts who will provide a contact point for ICDA and other Amiga enthusiasts that have groups and assign a budget to the project. With that, the idea is then cast to produce real tangible Amiga enhancing results for the masses in a short time frame. I doubt there'll be a lack of applications for the post to head up such a group, as many C12 Amiga users would jump at the chance.

Thanks for your valuable time Jeff, I sincerely hope you give due thought to this idea from the collective of Amiga enthusiasts.

Matt Bertelsen = matt@matteus.net



▲ Matt's idea for the Amiga OS interface.



■ Matt Bertelsen is C12 Amiga Magazine's Technical Editor.

## CU Amiga sales figures... a most unencouraging trend



### By Tony Rogers

August was a strange month. It always is. The summer period, half of the UK's population went off on holidays, and students around the country checked their mail off waiting for their exam results. The magazine publishing business has its own 'exam' results: released in August last - the official sales figures for the first half of the year - as we were just as heavy as the announcement.

Recent data showed, with many predicting the Amiga's downfall in 1997, sales of Amiga magazines are an interesting barometer of Amiga usage. Now that the UK Amiga magazine field has been narrowed to just two, some in the scene were predicting similarly gloomy results for CU Amiga.

However, despite the closure of two UK Amiga magazines already this year, the new officially certified world wide sales figures for CU Amiga for the period of January to June 1997 are most encouraging.

Our new average monthly sale is 27,391 copies. That's less than a 2% reduction on the sales from the second half of 1996. Even more encouraging is the fact that the figures also show that CU Amiga is now bought by more people in the UK than any other Amiga magazine. You can take a look at the official ABC (Audit Bureau of Circulations) web site for a full breakdown of sales, if you're that way inclined (<http://www.abc.org.uk>).

Six months ago, when our previous ABC figure of 26,841 was

**"Our new average monthly sale is 27,391 copies. That's less than a 2% reduction on the sales from the second half of 1996".**

announced, I told my publishers 'lets be very nice people. I should add that I was confident of maintaining those sales over the following period. As expected, the response was a friendly, slightly condescending pat on the head, based on the totally logical assumption that the new figures would take a substantial drop, just like all Amiga mag simulations have done for at least five years. I knew the Amiga scene would be smaller and as a result, there would be fewer people to sell the magazine to, but despite this I still had a funny feeling...

Now despite that 2% drop, I like to think I've kept my pledge, and that makes me a happy chap. I think don't think this is due to the widely believed theory of 'mopping up' readers from magazines which have closed. Rather it's a result of six months of excellent effort from

a small but an extremely enthusiastic team.

I'd like to thank everyone who has helped turn CU Amiga into such a positive and progressive magazine. Moreover, here comes the soppy bit. I'd like to thank you all for buying it. Writing with respect is the kind of act expression my publishers like.

You can be sure the next six months will see even more improvements in CU Amiga. We'll continue to bring you the best for your Amiga every month, and we'll also be unleashing a string of exciting new features, projects, cover disks and reviews.

Once again, thanks for supporting us through these rocky times. It's appreciated.

**■ Tony Rogers is CU Amiga Magazine's Editor**

## The £400 Amiga is possibly a rather bad idea



### By Andrew Ross

There is a lot of speculation and concern flying about as to what the future holds for the Amiga platform. One thing that worries people is the price. The Amiga is regarded as a cheap machine, and a lot of people think that all these wonderful ideas for hardware will make it an expensive machine, not in the spirit of the old Amiga.

The Amiga is thought of as a £400 computer, and if it comes with PowerPC, graphics cards,

Capirisha chips and so on, it isn't likely to remain as a £400 machine. Will an £800+ Amiga still be an Amiga? With the price of PC components surging, can the Amiga remain comparatively cheap?

Actually, when the Amiga first came out people reckoned that it was too expensive. At 20% more costly than its main rival (the Atari 2600) it won't have the best because people reckoned it was worth paying more for the better hardware. It seems cheaper today, but we seem to forget inflation. If a new Amiga was launched today at £7,000 it would be comparable. A £400 machine would be possible, but the limitations of making a computer fit a tight price bracket is what put us in this situation in the first place.

If the A2000 had been launched at a slightly higher price it could have been a lower system ten times

as expensive as it is now. When making an Amiga appear cheap in what results can be achieved on a minimum specification machine, if future machines offer a good range of specification, there should be no problem.

Taking a look at the £200 price point, it rapidly becomes clear that it is just too limiting. No new Connect should come without a hard drive, for instance. An £80 really is as low as we can go for a basic CPU, though even that is like a false economy when PowerPC chips cost little more for vastly more speed.

I'll have to be a tower case so that we aren't all stuck with the same old DIY or pay through the nose problems that plugging in such big standard devices as CD-ROM drives causes us today. Plug-in keyboards can then be industry standard, which is plenty convenient. Memory? Let's say 64Mb memory

systems are so low that there is little. It will save an inordinate amount of money. Let's total it all up then. Case, keyboard, hard drive, floppy drive, cables, 64Mb memory, 8800, CD32, CIC3.1... we're rapidly approaching the £400 limit already and we haven't got a motherboard and all those custom chips yet.

PCs are based on a motherboard which allows options to be plugged in as desired, the reason why pricing covers such wide ranges. The Connect motherboard announced by Index should allow OEM manufacturers to offer Amigas varying from an £800 £400/500 big box Amiga with a 20Mb hard drive for around £750. Go up to a grand and a half and you're looking at an 8800/980, 34Mb, CD-ROM, 40Gb hard drive, graphics card, memory and a 17" monitor.

That freedom of choice, rather than worshipping at traditional price points is what the Amiga really should be aiming for.

**■ Andrew Ross is CU Amiga Magazine's Staff Writer**

**"The Amiga is thought of as a £400 computer, and if it comes with PowerPC, graphics cards, Capirisha chips and so on, it isn't likely to remain as a £400 machine".**



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